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The Genus *Laena* Latreille (Coleoptera: Tenebrionidae) in China, with Descriptions of 47 New Species

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With 270 figures

Summary

The species of the genus *Laena* Latreille 1829 (Coleoptera: Tenebrionidae) from China including Tibet are treated and separated in a key. Some synonymies are established and 47 new species are described, altogether 71 species are now known from that area. – **New species**: *Laena baishuica* n. sp. (Yunnan), *becvari* n. sp. (Yunnan), *benesi* n. sp. (Sichuan), *bowaica* n. sp. (Sichuan), *brendelli* n. sp. (Yunnan), *businskyorum* n. sp. (Yunnan), *cholanica* n. sp. (Tibet), *daxueica* n. sp. (Sichuan), *deqenica* n. sp. (Yunnan), *diancangica* n. sp. (Yunnan), *dickorei* n. sp. (Tibet), *ganzica* n. sp. (Sichuan), *gyamdaica* n. sp. (Tibet), *habashanica* n. sp. (Yunnan), *haigouica* n. sp. (Sichuan), *heinzi* n. sp. (Tibet), *hengduanica* n. sp. (Yunnan/Sichuan), *hongyuanica* n. sp. (Sichuan), *houzhenzica* n. sp. (Shaanxi), *hualongica* n. sp. (Sichuan), *hubeica* n. sp. (Hubei), *kangdingica* n. sp. (Sichuan), *kubani* n. sp. (Yunnan), *langmusica* n. sp. (Sichuan/Gansu/Shaanxi), *ludingica* n. sp. (Sichuan), *luguica* n. sp. (Yunnan/Sichuan), *luhuoica* n. sp. (Sichuan), *mulica* n. sp. (Sichuan), *nanpingica* n. sp. (Sichuan), *nomurai* n. sp. (Sichuan), *nyingchica* n. sp. (Tibet), *paomaica* n. sp. (Sichuan), *puetzi* n. sp. (Sichuan), *qinlingica* n. sp. (Shaanxi/Sichuan), *safraneki* n. sp. (Tibet), *schuelkei* n. sp. (Sichuan), *shaluica* n. sp. (Sichuan), *smetanai* n. sp. (Sichuan), *tryznai* n. sp. (Tibet), *tuntalica* n. sp. (Tibet/Sichuan), *turnai* n. sp. (Sichuan), *wolongica* n. sp. (Sichuan), *wrasei* n. sp. (Sichuan), *yajiangica* n. sp. (Sichuan), *yulongica* n. sp. (Yunnan), *zogqenica* n. sp. (Sichuan), *zongdianica* n. sp. (Yunnan). – **New synonyms**: *Laena* Latreille 1829 (*Catolaena* Reitter 1899 n. syn., *Psilolaena* Heller 1923 n. syn.); *Laena adriani* n. nom. for *Laena schusteri* Kaszab 1938 from Darjeeling [not *Laena schusteri* (Heller 1923)]; *Laena bifoveolata* Reitter 1889 (*Laena imurai* Masumoto 1996 n. syn., *Laena shaanxiica* Masumoto 1996 n. syn.); *Laena chinensis* Kaszab 1965 (*Laena youcida* Masumoto 1996 n. syn.); *Laena daliensis* Masumoto & Yin 1994 (*Laena xiaoi* Masumot & Yin 1994 n. syn., *Laena yunnanensis* Masumoto & Yin 1994 n. syn., *Laena tumidoculata* Masumoto 1996 n. syn.); *Laena formaneki* Schuster 1916 (*Laena tibetana* Schuster 1916 n. syn.).

*) Contributions to Tenebrionidae, no. 35 – For no. 34 see: Ent. basiliensia 23, 2001.

Zusammenfassung

Die Arten der Gattung *Laena* Latreille 1829 (Coleoptera: Tenebrionidae) aus China einschließlich Tibet werden behandelt und in einem Bestimmungsschlüssel getrennt. Einige **neue Synonyme** werden begründet und **47 neue Arten** beschrieben (siehe Auflistung in „Summary"), insgesamt sind jetzt 71 Arten aus dem Gebiet bekannt.

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1. Introduction

The tenebrionid genus *Laena* Latreille 1829 contains up to now about 200 species, distributed from southeastern Europe and the Caucasus to Middle Asia, the Himalayas (only in Nepal 49 species), China including Tibet, Japan, Vietnam, Thailand and southward up to continental Malaysia. From China, hitherto 31 taxa have been described in scattered publications, which is quite a small number for this huge and diverse area. Extensive new collections induced me to summarize our knowledge about this genus from China. Some synonyms are established and 47 new species are described, rising the number of species now up to 71. Certainly our knowledge about this group in China is far from completeness, further species can be expected in the numerous and partly remote mountain ranges.

The exploration of the Chinese species of *Laena* can be divided in 3 phases. The very early phase is the first and only revision of the complete genus with an identification key (Schuster 1916), including among 76 species also 4 species from China. After that monograph, additional Chinese and Tibetan species have been described in different papers (Blair 1923, Heller 1923, Schuster 1926, 1940). The last phase starts with Kaszab (1965, 1970) and ends with Masumoto & Yin (1993, 1994) and Masumoto (1996, 1998), adding again several species.

Species of *Laena* are now known from the provinces Shaanxi, Hubei, Gansu, Sichuan, Yunnan, Xingjiang (= Sinkiang) and Xizang (= Tibet), a single additional species is known from "near Hongkong"; the genus is obviously lacking on Taiwan. The most speciose area in China is located in the mountains in Sichuan and Yunnan (see map Fig. 1). The flightless species usually possess quite small distribution areas. They are characteristic elements of the soil fauna in mature forests of different composition, in other regions species also live in treeless alpine or steppe habitats.

A combination of the following characters is considered herein as species-specific: Body length, shape of eyes, shape of pronotum and elytra, punctation and setation on pronotum and elytra, structure of the pronotal lateral margin, existence and position of setiferous pores on elytra, legs unmodified or modified in both sexes or only of males with teeth, spines, granules or dilatations and shape of the aedeagus (particularly of the joint parameres). Differences between these characters are only considered as species-specific, if no intermediate forms exist. The exact position of the setiferous pores on the elytra seems of less value at least for species taxonomy,

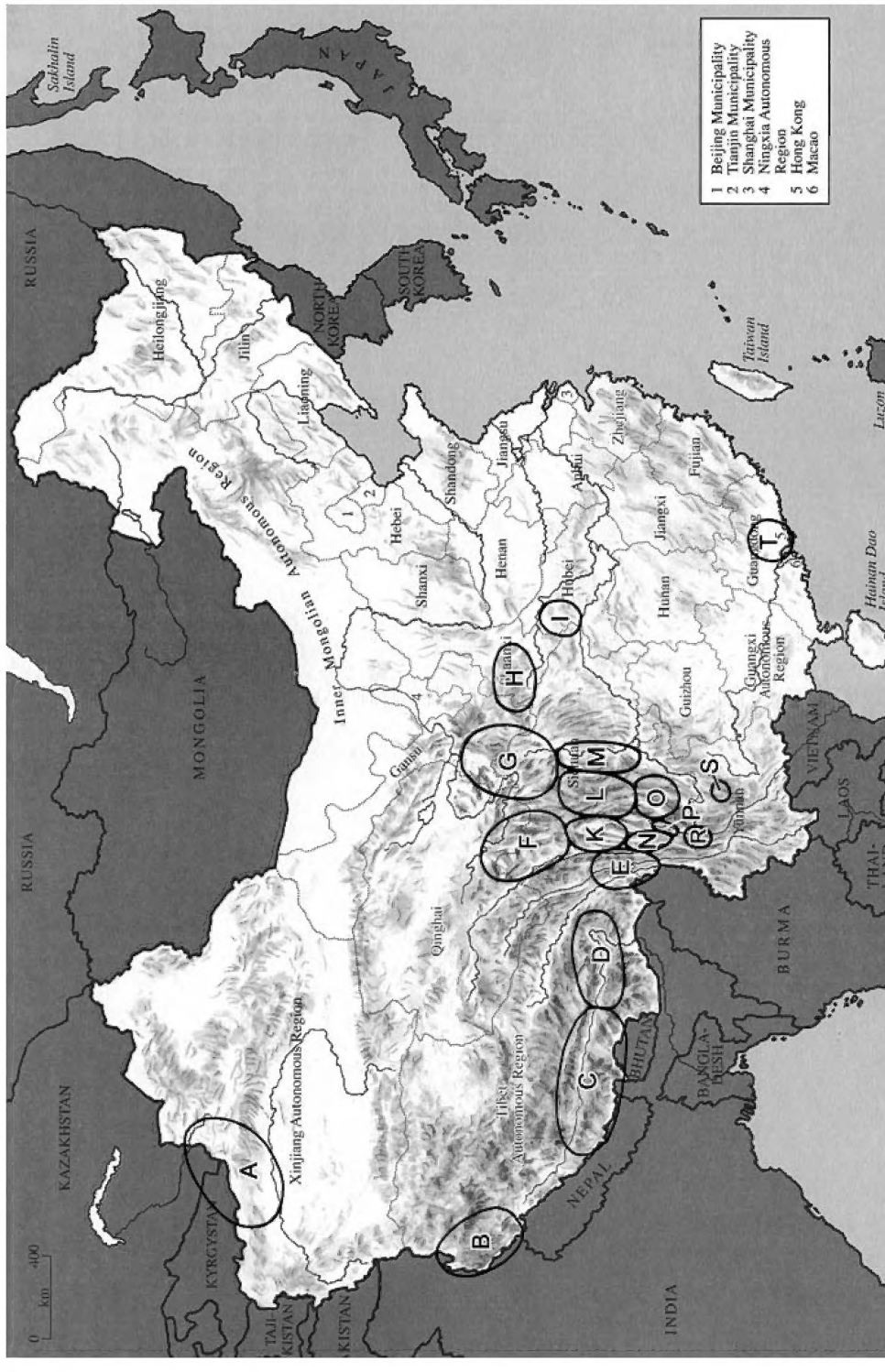

Fig. 1 Distribution of *Laena* species in China. For details see chapter 4. (zoogeographical notes). – Map by Museum of Natural History Vienna.

because I have seen some specimens of different species, in which the position and even the number differ on the left and right elytron of the same specimen.

Unfortunately, not a single apomorphic character is known to establish two or more subgenera or species groups within this speciose genus. The older division of the genus in two subgenera by the existence (subgenus *Laena* Latreille s. str.) or lack (subgenus *Catolaena* Reitter 1899) of a pronotal lateral margin is considered herein only as typological, thus *Catolaena* is herein formally synonymized with *Laena.* None of the species from China could be found in copious material I have seen from the Himalayas, from Thailand and from Malaysia. Thus, the Chinese species are not compared herein with species from other countries, but are treated in a separate identification key.

Abbreviations

BMNH	The Natural History Museum, London/UK (Martin Brendell);
CAPE	Collection Andreas Pütz, Eisenhüttenstadt/Germany;
CHBM	Collection Prof. Dr. Hans Bremer, Melle/Germany;
CJTK	Collection Jaroslav Turna, Kostelec Na Hane/Czech Republic;
CSBC	Collection Stanislav Bečvář, České Budějovice/Czech Republic;
DEI	Deutsches Entomologisches Institut, Eberswalde/Germany (Lutz Behne);
HNHM	Hungarian Natural History Museum, Budapest/Hungary (Dr. Ottó Merkl);
MHNG	Museum d'Histoire Naturelle, Genève/Suisse (Dr. Giulio Cuccodoro);
NHMB	Naturhistorisches Museum Basel/Suisse (Dr. Daniel Burckhardt);
NHMB-F	Naturhistorisches Museum, Basel/Suisse (collection Frey, Eva Sprecher);
NHMW	Naturhistorisches Museum, Wien/Austria (Dr. Heinrich Schönmann);
NKME	Naturkundemuseum, Erfurt/Germany (Matthias Hartmann);
NSMT	National Science Museum (Natural History), Tokyo/Japan (Dr. Shûhei Nomura);
SMNS	Staatliches Museum für Naturkunde, Stuttgart/Germany (author);
SMTD	Staatliches Museum für Tierkunde, Dresden/Germany (Olaf Jäger);
ZIP	Zoological Institute, Academy of Sciences, St. Petersburg/Russia (Dr. Alexander Kirejtshuk).

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I thank all colleagues and friends for the loan of material under their care, for their patience, and also for the possibility to keep some duplicates for the SMNS. Dr. Heinrich Schönmann (Vienna) and Johannes Reibnitz (Stuttgart) helped with the publication of the map. My own field work in China in 1999 was supported by Dr. Peter Jäger and Prof. Dr. Jochen Martens (both Mainz).

2. The species

2.1. *Laena alticola* Blair 1923 (Figs 164–167)

Type locality: S Tibet, Rangbuk, Everest base camp, 5030 m (Blair 1923, Schuster 1926).

Studied type material: Tibet, Rangbuk Glacier, Everest base camp, 16.500 ft., 17.–20. V. 1922 leg. T. G. Longstaff, 2 syntypes BMHN (labelled later as type and paratype, ♂ lectotype herewith designated), 2 syntypes (labelled later as paratypes) SMNS.

New material: S Tibet, mountain range N Cona, 4630–4780 m, alpine steppe, 30. VII. 1994 leg. B. Dickoré, 2 ex. SMNS. – S Tibet, E Gyangtse, westside of Karo La, 4800–5000 m, 11. VII. 1996 leg. W. Heinz, 1 ex. CJTK.

Redescription: Body length 4.5–5.5. mm. Eyes (Fig. 164) not reduced, not prominent. Shape of pronotum see Fig. 164, disc scattered with big punctures, dis-

tance as 1–5 diameters, lateral punctures with long setae, surface flat and shagreened, lateral margin bordered, basal margin unbordered and not bent downwards, posterior angles somewhat marked, propleures with more scattered and bigger punctures and same setation as on disc. Elytra (Fig. 164) with rows of punctures without striae, punctures of rows as big as punctures on pronotum, most punctures with a short seta, intervals with an irregular row of punctures half as big as those of the rows bearing each a setae of same length, all intervals flat and shining, interval 9 with 3 indistinct setiferous pores. All femora in both sexes without teeth. All tibia without distinct sexual dimorphism (Figs 165–166). Aedeagus see Fig. 167.

Lectotype designation: BLAIR (1923) did not designate in his publication a holotype, the description was based on "numerous examples". In the 4 loaned syntypes, 1 specimen was labelled as "type" by BLAIR, the other were labelled later as paratypes. The "type" specimen is a female, thus I designated and labelled 1 male as lectotype.

Remarks: The above listed new specimens from N Cona and Karo La (both north of Bhutan) have a striking finer punctation on head, pronotum and elytra, all other characters including the shape of the aedeagus coincide with the characters of the type series. Quite similar is *Laena parallelocollis,* but here the lateral margin of the pronotum is straight and parallel, the pronotal punctures are distinctly finer and the punctures of the elytral intervals are also finer. See also under *paomaica* n. sp. (chapter 2.48.) and *zogqenica* n. sp. (chapter 2.70.), both from Sichuan.

2.2. *Laena angulifemoralis* Masumoto 1996 (Figs 85–88)

Type locality: Yunnan, Jizu Shan, 2650 m.

Studied type material: Yunnan, Jizu Shan, Binchuan Xian, 2650 m, 25. X. 1995 leg. S. UÉNO, holotype NSMT.

New material: Yunnan, Dali zhou, Binchuan, Jizu Shan, 2500–3200 m, 31. VII. 1993 leg. C. HOLZSCHUH, 1 ex. CSBC.

Redescription: Body length 6.6–7.9 mm. Eyes (Fig. 85) not reduced, prominent. Shape of pronotum see Fig. 85, disc scattered with small punctures, distance as 3–7 diameters, most punctures with long setae, surface uneven and somewhat shining, lateral margin bordered, basal margin unbordered and not bent downwards, posterior angles rounded, propleures with same punctation and setation as on disc. Elytra (Fig. 85) with rows of punctures without striae, punctures of rows as big as punctures on pronotum, each puncture with a long seta, intervals with a fine row of scattered smaller punctures bearing each a setae of same length, all intervals flat and shining, interval 7 with a humeral setiferous pore, interval 9 with 3 setiferous pores. All femora of males (females unknown) with a distinct angle distally. Anterior tibiae of males with a parallel broadened anterior part (Figs 86–87). Aedeagus see Fig. 88.

2.3. *Laena baishuica* **n. sp.** (Figs 192–195)

Holotype (♂): China, Yunnan, Yulong Shan, Baishui, 2900–3500 m, 7.–12. VII. 1990 leg. V. KUBÁŇ, CSBC.

Paratypes: Same data as holotype, 3 ex. CSBC, 2 ex. SMNS. – China, Yunnan, Baishui, 3000 m, 26. VI.–3. VII. 1966 leg. E. KUČERA, 1 ♀ CSBC.

Etymology: Named after the village Baishui, in whose vicinity the types have been collected.

Description: Body length 6.5–8.5 mm. Eyes (Fig. 192) not reduced, not prominent. Shape of pronotum see Fig. 192, disc scattered with small punctures, distance as 1–4 diameters, most punctures with long setae, surface uneven and shining (? males) or somewhat dull (? females), basal part with longitudinal impression and disc with an additional pair of feeble impressions, lateral margin bordered, basal margin bordered and bent downwards, posterior angles rounded, propleures with wider punctation and shorter setation as on disc. Elytra (Fig. 192) with rows of punctures in indistinct striae, punctures of rows as big as punctures on pronotum, each puncture without distinct seta, intervals with a fine row of scattered smaller punctures bearing mostly a very short seta, all intervals flat and shining, interval 7 in humeral region with a small setiferous pore, interval 9 with 3 setiferous pores. All femora in both sexes without teeth. Anterior tibiae of males with a distinctly broadened anterior part, medial margin somewhat sinuated in bigger males; posterior tibiae of males medially with a distinct hump-like dilatation shortly before apex (Figs 193–194). Aedeagus see Fig. 195.

Diagnosis: The proportions of the pronotum and elytra and the dorsal punctation and setation are similar as in *chinensis,* but *Laena baishuica* n. sp. can be separated by unarmed femora in both sexes, and particularly by the distinctly modified anterior and posterior tibiae of males and by the structure of the aedeagus.

2.4. *Laena becvari* **n. sp.** (Figs 220–223)

Holotype (♂): China, Yunnan, Haba Shan, SE slope, 2500–3500 m, 3.–6. VI. 1995 leg. S. Bečvář, CSBC.

Paratypes: Same data as holotype, 4 ex. CSBC, 2 ex. SMNS. – China, Yunnan, Haba Shan, E slope, 3800–4600 m, 15. VII. 1992 leg. D. Král, 1 ex. CJTK.

Etymology: Named after Stanislav Bečvář (České Budějovice), who not only collected several *Laena* species in China, but also entrusted me with the study of his huge collection and generously allowed to keep several duplicates for the SMNS.

Description: Body length 7.8–8.8 mm. Eyes (Fig. 220) not reduced, not prominent. Shape of pronotum see Fig. 220, disc with dense and big punctures, punctures medially somewhat smaller than laterally, distance as 1–3 diameters, all punctures with long and erect setae, surface even and shining, disc sometimes with a shallow longitudinal impression, lateral margin somewhat marked posteriorly but unbordered, basal margin unbordered and not bent downwards, posterior angles rounded, propleures with wider punctation and shorter setation as on disc. Elytra (Fig. 220) with rows of punctures in feeble striae, punctures of rows as big as punctures on pronotal disc, each puncture with a long and erect seta, intervals with an irregular row of punctures, these punctures only a little smaller than punctures of the rows, each puncture bearing a similar long and erect seta as punctures of the rows, all intervals flat but somewhat uneven because of the big punctures of the intervals and shining, interval 9 with 1 basal setiferous pore. All femora in both sexes without teeth. All tibiae without distinct sexual dimorphism, all tibiae in both sexes with fine granulation medially (Figs 221–222). Aedeagus see Fig. 223.

Diagnosis: *Laena becvari* n. sp. seems to be quite isolated and can be recognized by the dense and erect setation on pronotum and elytra as well by the shape and size of the aedeagus, being quite small in comparison to the bigger body size. *Laena deqenica* n. sp. is similar in the body shape and size, but the elytral intervals of this species possess a dense and confluent punctation (not only with an irregular row of

big punctures), the dorsal setation is very short (not long and erect) and the aedeagus is of "normal" size and of completely other shape. See also *Laena shaluica* n. sp. (chapter 2.55).

2.5. *Laena benesi* **n. sp.** (Figs 17–20)

Holotype (♂): China, W Sichuan, Ganzi Pref., Litang Co., Shalui Shan, 25 km NW Litang, 4200 m, 1.–3. VII. 1999 leg. D. Wrase, NKME.

Paratypes: Same data as holotype, 1 ♀ SMNS. – China, C Sichuan, Rilong, Qionglai Shan (Siguiniang Shan), 3800–4300 m, 13. VII. 2000 leg. M. Janata, 2 ex. CSBC, 1 ex. SMNS.

Etymology: Named after MUDr. Vladimír Beneš (Ústi nad Labem), who collected a few specimens of *Laena* in China.

Description: Body length 6.1–8.0 mm. Eyes (Fig. 17) reduced, not prominent. Shape of pronotum see Fig. 17, disc scattered with small punctures, distance as 2–5 diameters, all punctures without setae, surface flat and shining, lateral margin bordered, this border continues on distal and basal margins, basal margin not bent downwards, posterior angles subrectangular, propleures nearly without punctures. Elytra (Fig. 17) with rows of punctures in striae, punctures of rows bigger than punctures on pronotum, all punctures without setae, intervals with scattered punctures nearly as big as pronotal punctures and without setae, all intervals flat and shining, all intervals without setiferous pores. All femora in both sexes without teeth. All tibiae without distinct sexual dimorphism (Figs 18–19). Aedeagus see Fig. 20.

Diagnosis: See under *Laena hualongica* n. sp. (chapter 2.32.).

Remarks: Two females from different localities might belong to the same species, but they are not designated as paratypes because of some doubts concerning their identifications: China, N Sichuan, Zhangla, 14.–17. VI. 1996 leg. Beneš & Štěpač, 1 ♀ CSBC. – China, W Sichuan, Yingxiuvan, 20.–26. VI. 1996 leg. Beneš & Štěpač, 1 ♀ CSBC.

2.6. *Laena bifoveolata* Reitter 1889 (Figs 231–234)

Laena imurai Masumoto 1996 **n. syn.**
Laena shaanxiica Masumoto 1996 **n. syn.**

Type localities: Kan-ssu (= Gansu) *(bifoveolata).* – Shaanxi, pass between Banfangzi and Xindianer, 2000 m *(imurai).* – Shaanxi, SW Xian, 1900–2000 m *(shaanxiica).*

Studied type material: Type material of *bifoveolata* not seen. – Shaanxi, Zhouzhi Xian, pass between Banfangzi and Xindianer, 2000 m, 21.–23. V. 1993 leg. Y. Imura, Fan & S. Koiwaya, holotype of *imurai* NSMT. – Shaanxi, near the headwaters of the river Laoyu-He SW Hu Xian, 2000 m, 11. V. 1993, leg. Y. Imura, holotype of *shaanxiica* NSMT.

New material: Gansu, Wudu, 8.–18. VII. 1997 leg. E. Kučera, 1 ex. CSBC. – S Gansu, Yuzhong, Xinglong Shan, 2400 m, coniferous forest, 6. VII. 1995 leg. M. Janata, 2 ex. CSBC, 1 ex. SMNS. – S Gansu, Yuzhong, Xinglong Shan, 2400 m, coniferous forest, 6. VII. 1995 leg. K. & B. Březina, 2 ex. CJTK. – Ganzu, Xinglong Shan, 70 km S Lanzhou, 2225–2380 m, 7. VIII. 1994 leg. A. Smetana (C 32), 2 ex. MHNG, 1 ex. SMNS. – Gansu, 120 km SW Lanzhou, Ponggartang, 30. VI.–2. VII. 1992 leg. J. Turna, 1 ex. CJTK. – Gansu, Xinglong Shan, Yuzhong, 2500–3000 m, 22.–26. VII. 1993 leg. W. Heinz, 1 ex. CJTK. – Shaanxi, Taibai Shan above Houzhenzi, 1300–1700 m & 1700–2600 m, 9. VI.–3. VII. 1998 leg. P. Jäger & J. Martens, 3 ex. SMNS. – Shaanxi, Zhouzhi Co., Houzhenzi, 3200 m, 18.–25. VII. 1998 leg. V. Beneš, 2 ex. CHBM. – Shaanxi, Qin Ling Shan, road Baoji to Taibei, pass 35 km S Baoji, 21.–23. VI. 1998 leg. O. Šafránek & M. Trýzna, 1 ex. CSBC. – Shaanxi, Qin Ling Shan, Hua Shan Mt. N Valley, 118 km E Xian, 1200–1400 m, 18.–20. VIII. 1995 leg. A. Pütz, 1 ex. CAPE. – Shaanxi, Hua Shan, 17.–21. VI. 1991 leg. R. Dunda, 1 ex. CSBC. – N Sichuan, Barkam, 2300 m, 22.–26. VI. 1991 leg. J. Kaláb, 1 ex. CJTK, 1 ex. SMNS. – Sichuan, Ta-tsien-Loû (=

Kangding), 1906 ("Chasseurs Indigènes des Missionnaires"), 1 ♀ HNHM. – W Hubei, Dashennongjia Nature Reserve, Muyu, E slope, 2000 m, 12.–15. VI. 1997 leg. BOLM, 1 ex. CSBC. – W Hubei, Dashennongjia Nature Reserve, 2000–2200 m, 3.–8. VI. 1995 leg. S. KURBATOV, 1 ex. HNHM. – Hubei, Dashennongjia Forest Reserve, 2000 m, 4.–8. VI. 1995 leg. A. SHAMAJEV, 2 ex. CJTK.

Redescription: Body length 8.3–9.5 mm. Eyes (Fig. 231) not reduced, not prominent. Shape of pronotum see Fig. 231, disc with dense and big punctures, distance below 1 diameter or even punctures confluent, all punctures with short setae, surface uneven and dull, disc with feeble longitudinal impression and with an additional pair of feeble impressions, lateral margin somewhat marked but without distinct border, basal margin unbordered and not bent downwards, posterior angles rounded, propleures with wider punctation and shorter setation as on disc. Elytra (Fig. 231) with rows of punctures without striae, punctures of rows as big as punctures on pronotum, each puncture with a short seta, intervals with distinct irregular punctation and transverse wrinkles, the punctures of the intervals bearing each a setae of same length, internal intervals flat and dull, interval 7 (and interval 9 in lesser extent) distinctly convex and nearly keel like, interval 9 with 3 setiferous pores. All femora in both sexes without teeth but anterior femur of males medially with distinct granulation. All tibiae of males with distinctly hooked inner apex (Figs 232–233). Aedeagus see Fig. 234.

Synonymy: *Laena bifoveolata* was described from Gansu. The above listed new material from Gansu fully agrees with the description, thus I have no doubts about the identification although I could not check type material of *bifoveolata* (only very few species of *Laena* occur in Gansu). The studied holotypes of *shaanxiica* Masumoto 1996 (p. 178) and *imurai* Masumoto 1996 (p. 179), both from adjacent Shaanxi, show no specific differences to this topotypical material from Gansu. The separation of both "species" by MASUMOTO (1996) in his key, not treating *bifoveolata,* was not based on species characters but only on infraspecific variations (so for example body slenderer or body more robust, pronotum closely and coarsely punctate or pronotum rugoso-punctate, elytra less distinctly haired or more distinctly haired). Thus, *imurai* Masumoto 1996 and *shaanxiica* Masumoto 1996 are considered as junior synonyms of *bifoveolata* Reitter 1889.

2.7. *Laena bowaica* **n. sp.** (Figs 29–32)

Holotype (♂): China, S Sichuan, pass 20 km S Muli/Bowa, 3500 m, mixed forest, 25. VII. 1995 leg. J. TURNA, CJTK.

Paratypes: Same data as holotype, 1 ex. CJTK, 1 ex. SMNS. – China, S Sichuan, 30 km NW Muli/Bowa, 3500 m, mixed forest, 1.–2. VII. 1998 leg. J. TURNA, 2 ex. CJTK, 1 ex. SMNS.

Etymology: Named after the village Muli/Bowa, in whose vicinity the types have been collected.

Description: Body length 7.3–8.7 mm. Eyes (Fig. 29) not reduced, not prominent. Shape of pronotum see Fig. 29, disc with big punctures, punctures laterally somewhat denser and bigger than medially, distance as 0.5–2 diameter, most punctures with short setae, surface uneven and shagreened, disc with a pair of dinstinct impressions and a weak longitudinal impression, lateral margin distinctly marked but not bordered, basal margin unbordered and not bent downwards, propleures with somewhat wider punctation and shorter setation as on disc. Elytra (Fig. 29) with rows of punctures without striae, punctures of rows as big as punctures on

pronotum, most punctures without distinct seta, intervals with scattered fine punctation, punctures bearing a very short seta, all inner intervals flat and shagreened, interval 7 keel-like, intervals 8–9 vertical and nearly not to be seen from dorsal, interval 9 with 3 setiferous pores. All femora in both sexes without teeth. All tibae of males nearly unmodified (Figs 30–31). Aedeagus see Fig. 32.

Diagnosis: See under *Laena yajiangica* n. sp. (chapter 2.65.).

2.8. *Laena brendelli* **n. sp.** (Figs 263–266)

Holotype (♂): China, Yunnan, Haba Shan, SE slope, 2500–3500 m, 3.–6. VI. 1995 leg. S. Bečvář, CSBC.

Etymology: Named after Martin Brendell (London), who kindly loaned several types from the collection of the Natural History Museum.

Description: Body length 4.0 mm. Eyes (Fig. 263) not reduced, not prominent. Shape of pronotum see Fig. 263, disc with dense and big punctures, distance as 1–4 diameters, all punctures with long setae, surface flat and shining, lateral margin unbordered, basal margin unbordered and not bent downwards, posterior angles rounded, propleures with wider punctation as on disc and without setation. Elytra (Fig. 263) with rows of punctures without striae, punctures of rows as big as punctures on pronotum, punctures with longer setae, intervals with a regular row of small punctures bearing each a long seta of same length, all intervals flat and shining, interval 9 with 3 setiferous pores. All femora in males (females unknown) without teeth. Tibiae of males without modifications (Figs 264–265). Aedeagus see Fig. 266.

Diagnosis: *Laena brendelli* n. sp. shares with *gracilis* from southern Tibet the small body size and shape, the unbordered lateral margin of the pronotum, the punctation and setation on the pronotum and on the elytra and the prolonged triangular parameters, but can be separated mainly by unarmed femora. *Laena daxueica* n. sp. from Sichuan belongs to the same group but can be separated by the shape of the aedeagus.

2.9. *Laena businskyorum* **n. sp.** (Figs 140–143)

Holotype (♂): China, N Yunnan, SE Deqen, 4100–4600 m, 27.–30. VI. 1992 leg. L. & R. Businský, CJTK.

Paratypes: Same data as holotype, 14 ex. CJTK, 6 ex. SMNS. – China, N Yunnan, Deqen, Bai Ma Xue Shan pass, 4200 m, 12.–13. VIII. 1998 leg. O. Šafránek & M. Trýzna, 1 ♀ CSBC. – China, Yunnan, Hengduan Shan, part Baima, 4300 m, 23. VI.–2. VII. 1996 leg. V. Kubáň, 3 ex. CJTK, 3 ex. CSBC, 1 ex. SMNS.

Etymology: Named after Ludmila and Roman Businský (Praha), who collected several new species of *Laena* in China.

Description: Body length 6.5–8.0 mm. Eyes (Fig. 140) not reduced, not prominent. Shape of pronotum see Fig. 140, disc with dense and big punctures, punctures medially somewhat smaller than laterally, distance as 0.5–2 diameters, most punctures with short setae, surface even and shagreened, lateral margin unbordered or indistinctly bordered in basal part, basal margin unbordered and not bent downwards, posterior angles rounded, propleures with wider punctation and same setation as on disc. Elytra (Fig. 140) with rows of punctures without striae, punctures of rows as big as punctures on pronotal disc, each puncture with a very short seta, intervals with dense and sometimes confluent punctation, these punctures nearly as big as the punctures of the rows, each punctures bearing a similar very short seta as punctures

of the rows, all intervals flat but somewhat uneven because of the dense punctation of the intervals and shagreened, interval 9 with 1 basal setiferous pore. All femora in both sexes without teeth. All tibiae of males weakly bent, particularly middle tibia (Figs 141–142). Aedeagus see Fig. 143.

Diagnosis: *Laena businskyorum* n. sp. shares with *deqenica* n. sp. from the same region the body size, the dense and sometimes confluent punctation on the elytral intervals with the punctures as big as those in the elytral rows, the structure of the male legs and even the shape of the aedeagus with broad parameres. The two species can be separated by the shape of the pronotum (distinctly broader in *businskyorum* n. sp., round in *deqenica* n. sp.) and by the shape of the elytra (broader in *businskyorum* n. sp., longer and parallel in *deqenica* n. sp.). I cannot find intermediate forms, thus I consider both as different species although the separation is based on somewhat weak differences.

2.10. *Laena chinensis* Kaszab 1965 (Figs 53–56)

Laena youcida Masumoto 1996 **n. syn.**

Type localities: Yunnan, Tali (= Dali), 3000–3900 m *(chinensis).* – Yunnan, Jizu Shan, 2550 m *(youcida).*

Studied type material: W Yunnan, Dali, 3000–3700 m, 31. V. 1955 leg. O. L. Kryzhanovskij (labels in Kyrillic and Chinese), 1 paratype of *chinensis* HNHM. – Yunnan, Jizu Shan, Binchuan Xian, 2550 m, 25. X. 1995 leg. Y. Watanabe & N. Xiao, holotype of *youcida* NSMT.

New material: Yunnan, Diancang Shan above Dali, 2500–2700 m, 8.–18. IV. 1999 leg. W. Schawaller, 1 ex. SMNS. – Yunnan, Heishui, 35 km N Lijiang, 1.–19. VII. 1992 leg. S. Bečvář, 21 ex. CSBC, 7 ex. SMNS. – Yunnan, Heishui, 35 km N Lijiang, 1.–19. VII. 1992 leg. E. Jendek, 5 ex. NHMW, 4 ex. CJTK. – Yunnan, Heishui, 35 km N Lijiang, 18. VI.–4. VII. 1993 leg. S. Bečvář, 12 ex. CSBC. – Yunnan, 50 km N Lijiang, Yulong Shan Nature Reserve, 24.–29. VI. 1993 leg. E. Jendek & O. Sausa, 5 ex. CSBC, 3 ex. NHMW, 1 ex. CJTK. – Yunnan, Yulong Shan, 3000–4000 m, leg. J. Soják, 1 ex. CSBC. – Yunnan, Yulong Shan, Baishui, 2900–3500 m, 7.–12. VII. 1990 leg. V. Kubáň, 2 ex. CSBC. – Yunnan, Yulong Shan, Ganhaizi Pass, 3000–3500 m, 18.–23. VII. 1990 leg. V. Kubáň, 2 ex. CSBC. – Yunnan, Yulong Shan, 3500–4000 m, 16.–19. VI. 1993 leg. V. Kubáň, 1 ex. CSBC, 1 ex. CJTK. – Yunnan, Yulong Shan, 3900 m, 16.–19. VI. 1993 leg. Bolm, 2 ex. CJTK. – Yunnan, Baishui, 9.–14. VII. 1995 leg. E. Kučera, 1 ex. CSBC. – NW Yunnan, Yulongxue Shan, near Baishui, 2900–3200 m, 7.–11. VII. 1994 leg. H. Schillhammer, 1 ex. NHMW. – Yunnan, Jizu Shan, 2500–3100 m, 30. V.–3. VI. 1993 leg. V. Kubáň, 1 ex. CJTK. – Yunnan, Jizu Shan, 2300 m, 18.–20. VII. 1995 leg. Bolm, 1 ex. NHMB. – S Sichuan, 20 km S Muli (Bowa), 3500 m, 29. VI. 1998 leg. M. Bocák, 1 ex SMNS. – S Sichuan, 30 km NW Muli (Bowa), 3500 m, 2. VII. 1998 leg. M Bocák, 2 ex. SMNS. – S Sichuan, 30 km NW Muli (Bowa), 3500 m, 1.–2. VII. 1998 leg. J. Turna, 2 ex. CJTK.

Redescription: Body length 5.8–8.5 mm. Eyes (Fig. 53) not reduced, not prominent. Shape of pronotum see Fig. 53, disc scattered with small punctures, distance as 1–4 diameters, most punctures with long setae, surface uneven and shining (? males) or somewhat dull (? females), basal part with longitudinal impression and disc with an additional pair of feeble impressions, lateral margin bordered, basal margin bordered and bent downwards in bigger specimens, posterior angles rounded, propleures with wider punctation and shorter setation as on disc. Elytra (Fig. 53) with rows of punctures in indistinct striae, punctures of rows as big as punctures on pronotum, each puncture without distinct seta, intervals with a fine row of scattered smaller punctures bearing sometimes a very short seta, all intervals feebly convex (nearly flat in smaller specimens) and shining, interval 7 in humeral region distinctly convex and with a small setiferous pore, interval 9 with 3 setiferous pores. All femo-

ra in both sexes with a distinct angle distally. Anterior tibiae of males with a parallel broadened anterior part (Figs 54–55). Aedeagus see Fig. 56.

Synonymy: The male holotype of *youcida* Masumoto 1996 shows no specific difference in comparison with the studied female paratype of *chinensis* Kaszab 1965, although they represent different sexes. MASUMOTO (1996) in his key separated the two only by the existence *(chinensis)* or lacking *(youcida)* of a setiferous pore at the base of the elytral interval 3, but neither in the description nor in the paratype of *chinensis,* such a pore was described or exists. Thus, *youdica* is considered as a junior synonym of *chinensis.*

2.11. *Laena cholanica* **n. sp.** (Figs 200–203)

Holotype (♂): SE Tibet, "Chola Shan" pass, road Yanjing to Markam, 50 km S Markam, 4400 m, alpine meadow, 24.–27. VI. 1997, leg. M. TRÝZNA & O. ŠAFRÁNEK, CSBC.

Paratypes: Same data as holotype, 6 ex. CSBC, 2 ex. SMNS. – SE Tibet, "Chola Shan" pass, road Yanjing to Markam, 50 km S Markam, 4400 m, alpine meadow, 24.–27. VI. 1997 leg. M. TRÝZNA, 6 ex. CSBC, 3 ex. SMNS.

Etymology: Named after the mountain range Chola Shan, where the types have been collected.

Description: Body length 6.2–6.6 mm. Eyes (Fig. 200) not reduced, not prominent. Shape of pronotum see Fig. 200, disc scattered with small punctures, distance as 2–6 diameters, all punctures with long setae, surface falt and shagreened, lateral margin bordered, basal margin unbordered and not bent downwards, posterior angles rounded, propleures with similar punctation and same setation as on disc. Elytra (Fig. 200) with rows of punctures without striae, punctures of rows as big as punctures on pronotum, most punctures with a short seta, intervals with an irregular scattered row of small punctures bearing each a seta of same length, all intervals flat and shagreened, interval 9 with 3 indistinct setiferous pores. All femora in both sexes without teeth. All tibae without distinct sexual dimorphism (Figs 201–202). Aedeagus see Fig. 203.

Diagnosis: *Laena cholanica* n. sp. is very similar to *parallelocollis* also from Tibet, the only differences are a somewhat bigger body size, somewhat longer and parallel elytra, a rounder pronotum and more sinuated tibiae of males. At the present state of knowledge I consider both as different species, but further specimens particulary from the type locality of *parallelocollis* might show that these differences only represent infraspecific variations.

2.12. *Laena cylindrica* Schuster 1926 (Figs 113–116)

Type locality: S Tibet, Everest Expedition, Yatung, 3050 m.

Studied type material: Tibet, Everest Expedition, Yatung, 10.000 ft., 17. IV. 1924 leg. R. W. G. HINGSTON, holotype BMNH.

New material: Not seen.

Redescription: Body length 5.0 mm. Eyes (Fig. 113) not reduced, not prominent. Shape of pronotum see Fig. 113, disc scattered with big punctures, distance as 2–6 diameters, lateral punctures with long setae, surface flat and shining, lateral margin unbordered, basal margin unbordered and not bent downwards, posterior angles rounded, propleures with more scattered and bigger punctures as on disc and without setation. Elytra (Fig. 113) with rows of punctures without striae, punctures of rows somewhat bigger than punctures on pronotum, most punctures with a very

short seta, intervals with an irregular scattered row of very small, nearly unvisible punctures bearing mostly a setae of same length, all intervals flat and shining, interval 9 with 3 indistinct setiferous pores. Each femur of males (females unknown) with a distinct tooth. Anterior tibiae of males without peculiarities, posterior tibiae of males somewhat swollen medially and with a finely hooked inner apex (Figs 114–115). Aedeagus see Fig. 116.

2.13. *Laena daliensis* Masumoto & Yin 1994 (Figs 243–246)

Laena xiaoi Masumoto & Yin 1994 **n. syn.**
Laena yunnanensis Masumoto & Yin 1994 **n. syn.**
Laena tumidoculata Masumoto 1996 **n. syn.**

Type localities: Yunnan, Laohu Shan in Dali District, 2200 m *(daliensis)*. – Yunnan, Diancang Shan W Dali, 3290–3500 m *(xiaoi)*. – Yunnan, Diancang Shan W Dali, 2500–2620 m *(yunnanensis)*. – Yunnan, Jizu Shan NE Dali, 2130 m *(tumidoculata)*.

Studied type material: Yunnan, Laohu Shan, Dali Shi, 2200 m, 3. IX. 1998 leg. Y. Watanabe, holotype of *daliensis* NSMT. – Yunnan, Diancang Shan, Yuzhu Feng, 3290 m, 5. IX. 1993 leg. S. Uéno, holotype of *xiaoi* NSMT. – Yunnan, Diancang Shan, Zhonghe Feng, Dali Shi, 4. IX. 1993 leg. S. Uéno, holotype of *yunnanensis* NSMT. – Yunnan, Jizu Shan, Binchuan Xian, 2130 m, 25. X. 1995 leg. Y. Watanabe & N. Xiao, holotype of *tumidoculata* NSMT.

New material: Yunnan, Heishui 35 km N Lijiang, 1.–19. VII. 1992 leg. S. Bečvář, 5 ex. CSBC. – Yunnan, Yulong Shan, 3200 m, 24.–26. V. 1993 leg. Bolm, 3 ex. NHMB, 2 ex. CSBC. – Yunnan, 50 km N Lijiang, Yulong Shan NR, 24.–29. VI. 1993 leg. E. Jendek & O. Sausa, 8 ex. CSBC, 5 ex. SMNS. – Yunnan, Yulong Shan, 2900–3500 m, 24.–26. V. 1993 leg. V. Kubáň, 1 ex. CJTK. – Yunnan, Yulong Shan, 3500–4000 m, 16.–19. VI. 1993 leg. V. Kubáň, 1 ex. CSBC. – Yunnan, Cang Shan, 2600–3100 m, 5.–6. VI. 1993 leg. V. Kubáň, 1 ex. CJTK. – Yunnan, Diancang Shan above Dali, 2500–2900 m, 8.–18. IV. 1999 leg. W. Schawaller, 13 ex. SMNS, 2 ex. BMNH. – Yunnan, Cang Shan, Dali, 2700 m, 17. VII. 1995 leg. Bolm, 1 ex NHMB.

Redescription: Body length 3.9–4.6 mm. Eyes (Fig. 243) not reduced, not prominent. Shape of pronotum see Fig. 243, disc with dense and big punctures, distance as 1–2 diameters, all punctures with long and erect setae, surface flat and shining, lateral margin bordered, basal margin unbordered and not bent downwards, posterior angles rounded, propleures with same punctation and setation as on disc. Elytra (Fig. 243) with rows of punctures without striae, punctures of rows as big as punctures on pronotum, each puncture with a long and erect seta, intervals with a regular row of smaller punctures bearing each a setae of same length, all intervals flat and shining, interval 7 with a humeral setiferous pore, interval 9 with 3 setiferous pores. All femora in both sexes without teeth. Posterior tibiae of males with finely hooked inner apex (Figs 244–245). Aedeagus see Fig. 246.

Synonymy: In cannot find any specific differences between the holotypes of *daliensis* Masumoto & Yin 1994 (p. 168), *yunnanensis* Masumoto & Yin 1994 (p. 167) and *xiaoi* Masumoto & Yin 1994 (p. 169), originating from the same area around Dali. The given differences in the original descriptons also represent only infraspecific variations (so for example body length 4.4–4.6 mm, 4.2–4.6 mm or 4.0–4.5 mm, basal piece of aedeagus strongly curved or less strongly curved, elytra more than 1.5 times, about 1.6 times or little less than 1.6 times as long as wide, elytral intervals more convex, slightly convex or less convex). Thus, all represent a single species with the herein fixed valid name *daliensis*. Furthermore, the holotype of *tumidoculata* Masumoto 1996, also from the region around Dali, does not show specific differ-

ences (apart from somewhat more prominent eyes), therefore *tumidoculata* is considered herein as a junior synonym of *daliensis.*

2.14. *Laena daxueica* **n. sp.** (Figs 93–96)

Holotype (♂): China, Sichuan, Ganzi Pref., Daxue Shan, N Kangding, 2600–2700 m, 22.–24. V. 1997 leg. A. Pütz, CAPE.

Paratypes: Same data as holotype, 1 ex. SMNS. – China, W Sichuan, Daxue Shan, Paoma Shan near Kangding, 2700–2900 m, 22. V. 1997 leg. M. Schülke, 1 ex. CJTK.

Etymology: Named after the mountain range Daxue Shan, where the types have been collected.

Description: Body length 3.7–3.8 mm. Eyes (Fig. 93) not reduced, not prominent. Shape of pronotum see Fig. 93, disc with dense and big punctures, distance as 0.5–4 diameters, all punctures with long setae, surface flat and shagreened, lateral margin unbordered, basal margin unbordered and not bent downwards, posterior angles rounded, propleures with wider punctation and shorter setation as on disc. Elytra (Fig. 93) with rows of punctures without striae, punctures of rows as big as punctures on pronotum, all punctures with long setae, intervals with a regular row of distinct punctures bearing each a long seta of same length, all intervals flat and shining, interval 9 with 3 setiferous pores. Anterior femora in males (females unknown) with smaller, middle and posterior femora with distinct teeth. Posterior tibiae of males with finely hooked inner apex (Figs 94–95). Aedeagus see Fig. 96.

Diagnosis: *Laena daxueica* n. sp. shares with *gracilis* from SE Tibet the small body size below 4 mm, the shape of pronotum and elytra, the unbordered lateral margin of the pronotum, the punctation and setation on the pronotum and elytra as well as the armed femora. Both can be separated distinctly by the different shape of the aedeagus. *Laena wrasei* n. sp. from Sichuan might belong to the same group, but this species has besides a somewhat different aedeagus unarmed femora, a rougher punctation and distinct impressions on the pronotum and a shorter elytral setation.

2.15. *Laena deqenica* **n. sp.** (Figs 144–147)

Holotype (♂): China, NW Yunnan, road Deqen to Yanjing, 10 km W Deqen, 3600 m, 21.–22. VI. 1997 leg. M. Trýzna & O. Šafránek, CSBC.

Paratypes: Same data as holotype, 3 ex. CSBC, 2 ex. SMNS. – China, NW Yunnan, road Deqen to Yanjing, 10 km NW Deqen, 3600 m, 21.–22. VI. 1997 leg. J. Turna, 3 ex. CJTK, 1 ex. SMNS. – China, NW Yunnan, road Deqen to Yanjing, 30 km NW Deqen, 3300 m, 23. VI. 1997 leg. J. Turna, 1 ex. CJTK.

Etymology: Named after the village Deqen, in whose vicinity the types have been collected.

Description: Body length 7.0–8.0 mm. Eyes (Fig. 144) not reduced, not prominent. Shape of pronotum see Fig. 144, disc with dense and big punctures, punctures medially somewhat smaller than laterally, distance as 0.5–2 diameters, most punctures with short setae, surface even and shining, disc with a shallow longitudinal impression, lateral margin bordered, basal margin unbordered and not bent downwards, posterior angles rounded, propleures with a little wider punctation and same setation as on disc. Elytra (Fig. 144) with rows of punctures without striae, punctures of rows as big as punctures on pronotal disc, each punctures with a very short seta, intervals with dense and sometimes confluent punctation, these punctures nearly as big as the punctures of the rows, each puncture bearing a similar very short se-

ta as punctures of the rows, all intervals flat but somewhat uneven because of the dense punctation of the intervals and shining, interval 9 with 1 basal setiferous pore. All femora in both sexes without teeth. All tibiae of males weakly bent, particularly middle tibia (Figs 145–146). Aedeagus see Fig. 147.

Diagnosis: See under *Laena businskyorum* n. sp. (chapter 2.9.).

2.16. *Laena diancangica* **n. sp.** (Figs 148–151)

Holotype (♂): China, Yunnan, Diancang Shan above Dali, 2700–2900 m, 14. IV. 1999 leg. W. Schawaller, SMNS.

Paratypes: Same data as holotype, 2 ex. SMNS. – China, Yunnan, Diancang Shan above Dali, 2500–2700 m, 8.–18. IV. 1999 leg. W. Schawaller, 1 ex. SMNS.

Etymology: Named after the mountain range Diancang Shan, where the types have been collected.

Description: Body length 3.8–4.8 mm. Eyes (Fig. 148) not reduced, not prominent. Shape of pronotum see Fig. 148, disc with dense and big punctures, distance as 0.5–2 diameters, most punctures with long setae, surface flat and shining, lateral margin unbordered, basal margin unbordered and not bent downwards, posterior angles rounded, propleures with wider punctation and shorter setation as on disc. Elytra (Fig. 148) with rows of punctures without striae, punctures of rows as big as punctures on pronotum, most punctures with a short seta, intervals without any punctation and setation, all intervals slightly convex and shining, interval 9 with 3 setiferous pores. All femora in both sexes without teeth. Tibiae of males nearly unmodified, posterior tibiae of males with finely hooked inner apex (Figs 149–150). Aedeagus see Fig. 151.

Diagnosis: *Laena diancangica* n. sp. with the small body size and shape and with the unarmed legs is similar to *daliensis* from the same area, but can be separated by the narrower pronotum with unbordered lateral margin, by the elytral intervals without any punctation and and setation and by the different shape of the aedeagus with triangular joint parameres. See also *wolongica* n. sp. from Sichuan (chapter 2.62.).

2.17. *Laena dickorei* **n. sp.** (Figs 176–179)

Holotype (♂): SE Tibet, Tsangpo valley, Tsangpo bridge near Tsela Dzong, 3050 m, *Pinus* forest, IX. 1989 leg. B. Dickoré, SMNS.

Paratypes: Same data as holotype, 3 ex. SMNS, 2 ex. DEI.

Etymology: Named after Dr. Wolf Bernhard Dickoré (Göttingen), who collected the types and generously deposited his material partly in the SMNS.

Description: Body length 8.4–8.8 mm. Eyes (Fig. 176) not reduced, not prominent. Shape of pronotum see Fig. 176, disc scattered with small punctures, punctures on disc somewhat smaller than laterally, distance as 3–8 diameters, lateral punctures with longer setae, surface flat and shagreened, lateral margin bordered, basal margin unbordered and not bent downwards, posterior angles rounded, propleures with more scattered and bigger punctures and same setation as on disc. Elytra (Fig. 176) with rows of punctures without striae, these rows partly extinguished in posterior part, punctures of rows as big as punctures on pronotum, most punctures with a very short seta, intervals with an irregular scattered row of very small punctures bearing each a seta of same length, all intervals flat and shagreened, interval 9 with 3

indistinct setiferous pores. All femora in both sexes without teeth. Anterior tibiae of males distinctly bent medially, middle tibiae of males medially with a distinct dilatation armed with spines, posterior tibiae of males dilated in the distal part and medially armed with spines (Figs 177–178). Aedeagus see Fig. 179.

Diagnosis: *Laena dickorei* n. sp. shares with *tryznai* n. sp., also from SE Tibet, the general body shape and size, the shape of the subquadrate pronotum, the posteriorly extinguished elytral rows and the armed posterior tibiae of males but can be separated particularly by the shape of the aedeagus, by the shape of the sexually dimorph tibiae (anterior and middle tibiae of males not distinctly modified in *tryznai* n. sp.), and by a distinctly narrower pronotum and narrower joint elytra. See also under *Laena gyamdaica* n. sp. (chapter 2.24.) also from Tibet.

2.18. *Laena emeishana* Masumoto 1996 (Figs 267–270)

Type locality: Sichuan, Emei Shan, 2365–2510 m.

Studies type material: Sichuan, Emei Shan, Leidongping, 2365 m, 3. XI. 1995 leg. S. Uéno, holotype NSMT.

New material: Sichuan, Emei Shan, Leidongping, 2500m, 17.–19. VII. 1996 leg. A. Smetana, J. Farkač & P. Kabátek, 7 ex. NHMB, 3 ex. SMNS.

Redescription: Body length 3.5–4.3 mm. Eyes (Fig. 267) not reduced, not prominent. Shape of pronotum see Fig. 267, disc with big punctures, distance as 2–4 diameters, all punctures with long setae, surface somewhat dull, lateral margin unbordered, basal margin unbordered and not bent downwards, posterior angles rounded, propleures with same punctation and setation as on disc. Elytra (Fig. 267) with rows of punctures without striae, these rows partly extinguished in posterior part, punctures of rows as big as punctures on pronotum, most punctures with a seta, intervals unpunctured and without any setation, all intervals flat and shining, interval 9 with 3 setiferous pores. All femora in both sexes without teeth. All tibiae without sexual dimorphism (Figs 268–269). Aedeagus see Fig. 270.

2.19. *Laena fengileana* Masumoto 1996 (Figs 129–132)

Type locality: Shaanxi, SW Xian, 1900 m.

Studied type material: Shaanxi, SW Chang'an Xian, near headwaters of river Feng-Ile, 1900 m, 9. V. 1993 leg. Y. Imura, holotype NSMT.

New material: Shaanxi, Qin Ling Shan, autoroute km 93 S Zhouzhi, 108 km SW Xian, 1650 m, 1.–2. IX. 1995 leg. A. Pütz, 4 ex. CAPE, 2 ex. SMNS. – Shaanxi, Qin Ling Shan, autoroute km 93 S Zhouzhi, 108 km SW Xian, 1650 m, 1.–2. IX. 1995 leg. M. Schülke, 7 ex. CJTK, 3 ex. SMNS. – N Sichuan, valley SW Barkam, 3000–3800 m, 22. VII. 1995 leg. M. Janata, 1 ex. CSBC.

Redescription: Body length 5.7 mm. Eyes (Fig. 129), not reduced, not prominent. Shape of pronotum see Fig. 129, disc with big punctures, distance as 1–5 diameters, all punctures with long setae, surface even and shining, lateral margin unbordered, basal margin unbordered and not bent downwards, posterior angles rounded, propleures with same punctation and setation as on disc. Elytra (Fig. 129) with rows of punctures without striae, punctures of rows as big as punctures on pronotum, each puncture with a long seta, intervals with a row of scattered and very small punctures bearing each a seta of same length, all intervals nearly flat and shining, interval 9 with 3 setiferous pores. All femora in both sexes with distinct teeth.

Posterior tibiae of males slightly broadened medially (Figs 130–131). Aedeagus see Fig. 132.

Remarks: See under *Laena qinlingica* n. sp. (chapter 2.51.).

2.20. *Laena formaneki* Schuster 1916 (Figs 101–104)

Laena tibetana Schuster 1916 **n. syn.**

Type locality: SW Tibet, Po-o (border to Himachal Pradesh) (both *formaneki* and *tibetana*).

Studied type material: SW Tibet, Po-o, type of *formaneki* NHMW (♂ lectotype herewith designated). – "Kashmir", Po-o, STAUDINGER, 1 cotype of *tibetana* NHMB-F (♀ lectotype herewith designated).

New material: "Kaschmir", Po-o, HAUSER/GASSNER, 1 ex. NHMB-F.

Redescription: Body length 5.0–5.8 mm. Eyes (Fig. 101) not reduced, not prominent. Shape of pronotum see Fig. 101, disc scattered with big punctures, distance as 1–4 diameters, lateral punctures with longer setae, surface flat and shagreened, lateral margin bordered, basal margin unbordered and somewhat separated but not bent downwards, posterior rounded, propleures with more scattered and bigger punctures and same setation as on disc. Elytra (Fig. 101) with rows of punctures without striae, punctures of rows as big as punctures on pronotum, most punctures with a very short seta, intervals with an irregular row of punctures half as big as those of the rows bearing no distinct setae, all intervals flat and shagreened, interval 9 with 3 indistinct setiferous pores. All femora in males with distinct, in females with smaller teeth. All tibiae of males without distinct peculiarities, distal parts broadened (Figs 102–103). Aedeagus see Fig. 104.

Synonymy: Although I have seen only a single male type of *formaneki* Schuster 1916 and of *tibetana* Schuster 1916 only a single female type I consider both from the same locality Po-o as conspecific, with the valid name *formaneki.* SCHUSTER (1916) separated the two forms by the different shape of the elytra, by a different punctation of the elytral rows and by a somewhat different shape of the tibiae. These "differences" might reflect either infraspecific variations or sexual dimorphism and are not species-specific. *Laena alticola,* also from southern Tibet, seems closely related with similar body shape and punctation (but without armed femora) and possesses comparable differences in the dorsal punctation.

Lectotype designations: SCHUSTER (1916) did not designate in his description of *formaneki* a holotype, the description was based on "zwei übereinstimmende Stücke". The loaned male "type" from the NHMW (collection BREIT) is herewith designated and labelled as lectotype. The second specimen mentioned in the description of *formaneki* might be the above listed male in the NHMB-F, this specimen is without any type label. Neither was a holotype designated in the description of *tibetana*, the description was based on "zwei Stücke meiner Sammlung". The loaned female "cotype" from the NHMB-F is herewith designated and labelled as lectotype of *tibetana.* The second specimen mentioned in the description of *tibetana* is not in the NHMB-F at present.

Remarks: The exact localization of the type locality is not quite clear. "Po-o" is a border village in India/Himachal Pradesh, so the type could be collected north of the border in western Tibet (as labelled in the lectotype of *formaneki*), or south of the border in "Kashmir" (as labelled in the lectotype of *tibetana* or in the non-type specimen of *formaneki*).

2.21. *Laena ganzica* **n. sp.** (Figs 121–124)

Holotype (♂): China, W Sichuan, Ganzi Pref., Luding Co., Erlang Shan Pass, 8 km SE Luding, 3000 m, 21.–29. VI. 1999 leg. D. Wrase, NKME.

Paratypes: China, W Sichuan, Ya'an Pref., Tianquan Co., W Erlang Shan Pass, 2900 m, 29. VI. 1999 leg. A. Pütz, 2 ex. CAPE, 1 ex. SMNS.

Etymology: Named after the prefecture Ganzi, where the types have been collected.

Description: Body length 6.0–7.2 mm. Eyes (Fig. 121) not reduced, not prominent. Shape of pronotum see Fig. 121, disc scattered with big punctures, distance as 0.5–3 diameters, all punctures with short setae, surface uneven and shagreened, disc with a pair of distinct impressions, lateral margin unbordered, basal margin unbordered and bent downwards, posterior angles rounded, propleures with sparser punctation as on disc and without setation. Elytra (Fig. 121) with rows of punctures without striae, punctures of rows as big as punctures on pronotum, punctures with short setae, intervals with a row of very fine punctures bearing each a seta of same length, inner intervals slightly convex, intervals 5 and particularly interval 7 distinctly convex, interval 9 with 3 setiferous pores. All femora in both sexes with distinct teeth. All tibiae without distinct sexual dimorphism (Figs 122–123). Aedeagus see Fig. 124.

Diagnosis: *Laena ganzica* n. sp. shares with *smetanai* n. sp. from Sichuan the body shape and size as well as the distinctly armed femora, but can be separated by the rough punctation of the pronotum with a pair of distinct impressions, by complete elytral rows and by the setation on the elytra, as well as by a different aedeagus. *Laena angulifemoralis* (but pronotum with lateral border, dorsal setation longer, different aedeagus) and *fengileana* (but different shape of pronotum, different aedeagus) belong to the same group.

2.22. *Laena gigantea* Schuster 1940 (Figs 184–187)

Type locality: Sichuan, Tatsienlu-Kiulung (Tatsienlu = Kangding).
Studied type material: None.
New material: SE Sichuan, Ginfu Shan, 600–1600 m, coll. E. Reitter, 1 ex. HNHM.

Redescription: Body length 10.0–11.5 mm. Eyes (Fig. 184) not reduced, not prominent. Shape of pronotum see Fig. 184, disc with big punctures, distance as 1–3 diameters, lateral punctures with very short setae, surface somewhat uneven and somewhat dull, lateral margin bordered, basal margin unbordered and not bent downwards, posterior angles rounded, propleures with wider punctation and without setation. Elytra (Fig. 184) with rows of punctures in distinct striae, punctures of rows somewhat smaller than punctures on pronotum, all punctures without seta, intervals with an irregular row of scattered very small punctures, the small punctures of the intervals bearing each a very short seta, intervals convex and shining, interval 9 with 3 setiferous pores. All femora in both sexes without teeth. Anterior tibiae of males unmodified, posterior tibiae of males with distinctly hooked inner apex and medially with internal dilatation (Figs 185–186). Aedeagus see Fig. 187.

2.23. *Laena gracilis* Schuster 1926 (Figs 89–92)

Type locality: S Tibet, border to Sikkim, Jelap La, 3660 m.
Studied type material: S Tibet, Jelap La, Tibetan side, 12.000 ft., 1. IV. 1924 leg. R. W. G. Hingston, holotype BMNH.
New material: Not seen.

Redescription: Body length 3.8 mm. Eyes (Fig. 89) not reduced, not prominent. Shape of pronotum see Fig. 89, disc with dense and big punctures, distance as 0.5–3 diameters, all punctures with long setae, surface flat and shagreened, lateral margin unbordered, basal margin unbordered and not bent downwards, posterior angles rounded, propleures with wider punctation and shorter setation as on disc. Elytra (Fig. 89) with rows of punctures without striae, punctures of rows smaller than punctures on pronotum, punctures without distinct setae, intervals with a regular row of distinct punctures bearing each a long and erect seta, all intervals flat and shining, interval 9 with 3 setiferous pores. Anterior femora in males (females unknown) with smaller, middle and posterior femora with distinct teeth. Tibiae of males without modifications (Figs 90–91). Aedeagus see Fig. 92.

Remarks: See also under *daxueica* n. sp. (chapter 2.14.) from Sichuan. The two species are quite similar and can be distinctly separated only by the different aedeagus. *Laena brendelli* n. sp. from Yunnan has a similar aedeagus as *gracilis* but can be separated by unarmed femora.

2.24. *Laena gyamdaica* **n. sp.** (Figs 172–175)

Holotype (♂): Tibet, Basum Tso, 90 km W Gyamda, 3800–5000 m, 9.–11. VI. 1997 leg. M. Folwarczny, CJTK.
Paratypes: Same data as holotype, 2 ♀♀ CJTK, 1 ♀ SMNS.

Etymology: Named after the village Gyamda, in whose vicinity the types have been collected.

Description: Body length 8.5–9.8 mm. Eyes (Fig. 172) not reduced, not prominent. Shape of pronotum see Fig. 172, disc regularly and scattered with small punctures, distance as 1–4 diameters, most punctures with short setae, surface somewhat uneven and shagreened, disc basally with a longitudinal impression, lateral margin bordered, basal margin unbordered and not bent downwards, posterior angles rounded, propleures with more scattered punctures and same setation as on disc. Elytra (Fig. 172) with rows of punctures without striae, these rows partly exstinguished in posterior part, punctures of rows as big as punctures on pronotum, punctures without or with a very short seta, intervals with an irregular scattered row of small punctures bearing each a longer seta, all intervals flat and shining, interval 9 with 3 indistinct setiferous pores. All femora in both sexes without teeth. Anterior and middle tibiae of males without distinct peculiarities, posterior tibiae of males medially armed with spines and slightly dilated in the distal part as well with distinctly hooked inner apex (Figs 173–174). Aedeagus see Fig. 175.

Diagnosis: *Laena gyamdaica* n. sp. belongs to the group around *dickorei* n. sp. and *tryznai* n. sp., both also from Tibet, because of the long and parallel elytra, the pronotum with a lateral border, unarmed femora and the armed posterior tibiae in males, but can be separated by the different shape of the pronotum, by rougher punctation on the pronotum and in the elytral rows and by the shape of the aedeagus. See also under *hengduanica* n. sp. (chapter 2.28.).

2.25. *Laena habashanica* **n. sp.** (Figs 45–48)

Holotype (♂): China, Yunnan, Haba Shan, SE slope, 2500–3500 m, 3.–6. VI. 1995 leg. S. Bečvář, CSBC.

Paratypes: Same data as holotype, 19 ex. CSBC, 8 ex. SMNS. – China, Yunnan, Haba Shan, SE slope, 2000–3000 m, 10.–13. VII. 1992 leg. V. Kubáň, 4 ex. CSBC. – China, Yunnan, Haba Shan, E slope, 3800–4600 m, leg. D. Král, 6 ex. CJTK.

Etymology: Named after the mountain range Haba Shan, where the types have been collected.

Description: Body length 6.2–7.5 mm. Eyes (Fig. 45) not reduced, not prominent. Shape of pronotum see Fig. 45, disc with big punctures, punctures laterally somewhat denser and bigger than medially, distance as 0.5–2 diameters, most punctures with short setae, surface uneven and shagreened, disc with a pair of distinct impressions and base with a transverse impression, lateral margin distinctly marked but not bordered, basal margin unbordered and bent downwards by the basal impression, propleures with wider punctation and shorter setation as on disc. Elytra (Fig. 45) with rows of punctures without striae, punctures of rows as big as punctures on pronotum, most punctures without distinct seta, intervals with a irregular row of big punctures bearing a very short seta, all inner intervals flat but wrinkled between punctures of rows and of intervals and shining, interval 7 keel-like, intervals 8–9 vertical and nearly not to be seen from dorsal, interval 9 with 3 setiferous pores. All femora in both sexes without teeth. All tibiae of males nearly unmodified (Figs 46–47). Aedeagus see Fig. 48.

Diagnosis: *Laena yulongica* n. sp. and *Laena habashanica* n. sp. are quite similar and probably also closely related. They can be separated by the different shape of the aedeagus (parameres broad in *yulongica* n. sp., triangular in *habashanica* n. sp.), by the shape of the pronotum (widest before middle in *yulongica* n. sp., widest in middle in *habashanica* n. sp.), and by the structure of the elytra (joint inner intervals between both keel-like intervals 7 nearly flat and with fine punctures in *yulongica* n. sp., joint inner intervals between both keel-like intervals 7 rounded and with rough punctures of nearly the same size as those in the rows in *habashanica* n. sp.).

2.26. *Laena haigouica* **n. sp.** (Figs 41–44)

Holotype (♂): China, N Sichuan, Jiuzhaigou, 3100 m, 13.–15. VI. 1992 leg. M. Bok, SMNS.

Paratypes: Same data as holotype, 7 ex. SMNS. – China, N Sichuan, 30 km N Nanping, Jiuzhaigou, 3100 m, 13.–15. VI. 1992 leg. J. Turna, 6 ex. CJT, 2 ex. SMNS. – China, Sichuan, 70 km NEE Songpan, 2500 m, 19. VI. 1992 leg. J. Turna, 2 ex. CJTK. – China, N Sichuan, Nanping, 3500 m, 10.–19. VI. 1997 leg. S. Murzin, 1 ex. CJTK. – China, N Sichuan, Jiuzhaigou-Nuorilang, 3050 m, 21. VI. 1991 leg. Cavazzuti, 2 ex. CJTK.

Etymology: Named after the village Jiuzhaigou, in whose vicinity most of the types have been collected.

Description: Body length 7.7–8.8 mm. Eyes (Fig. 41) not reduced, not prominent. Shape of pronotum see Fig. 41, disc irregularly punctured, punctures laterally denser and bigger than medially, distance as 1–4 diameters, lateral punctures with short setae, surface uneven and shagreened, disc with a pair of bigger and a pair of smaller impressions, lateral margin bordered, basal margin unbordered and bent downwards, lateral margin ending basally in an upper level than basal margin, propleures with wider punctation and shorter setation as on disc. Elytra (Fig. 41) with

rows of punctures without striae, punctures of rows smaller than punctures on pronotum, lateral rows with feebly bigger punctures than medial rows, each puncture without distinct seta, intervals with a fine and irregular row of scattered smaller punctures bearing sometimes a very short seta, all inner intervals flat and shagreened, interval 7 convex and nearly keel-like in males, less developed in females, intervals 8–9 to be seen from dorsal and not vertical, interval 9 with 3 setiferous pores. All femora in both sexes without teeth. Anterior and posterior tibiae of males nearly unmodified (Figs 42–43). Aedeagus see Fig. 44.

Diagnosis: Belongs to the group around *mirabilis-mulica* n. sp., but with the elytral interval 7 only convex and not keel-like, with the intervals 8–9 not vertical and to be seen in dorsal view, with different shape of the pronotum with the lateral margin bordered, and with different shape of the aedeagus (aedeagus unknown in *mirablis*). See under *Laena mulica* n. sp. (chapter 2.43.).

2.27. *Laena heinzi* **n. sp.** (Figs 133–135)

Holotype (♀): S Tibet, S Dongu La, 128 km S Yangpachen (= Yangbajain), 4400 m, 15. VII. 1996 leg. W. Heinz, CJTK.

Paratype: Same data as holotype, 1 ♀ SMNS.

Etymology: Named after Ing. Walter Heinz (Schwanfeld), who collected the types and other species of *Laena* in Tibet and Sichuan together with his indefatigable wife Ortrud.

Description: Body length 5.5–6.2 mm. Eyes (Fig. 133) not reduced, not prominent. Shape of pronotum see Fig. 133, disc scattered with bigger punctures, distance as 1–4 diameters, lateral punctures with very long setae, surface flat and shining, lateral margin unbordered, basal margin unbordered and not bent downwards, posterior angles rounded, propleures with same punctation but shorter setation as on disc. Elytra (Fig. 133) with indistinct rows of punctures without striae confused with the punctures of the intervals of same size, punctures of elytra as big as punctures on pronotum, most punctures with a very short seta, surface between punctures flat and shining, lateral part of elytra (intervals not to be seen) with 1 indistinct setiferous pore. All femora in females (males unknown) without teeth. Sexual dimorphism of tibiae unknown (Figs 134–135). Aedeagus unknown.

Diagnosis: *Laena heinzi* n. sp. possesses a similar body shape and size as the species of the *alticola*-group, but can be separated by the confused elytral punctation without distinct rows and intervals, by very long setation on the pronotum and very short setation on the elytra and by the unbordered lateral margin of the pronotum. Although only 2 females are available (thus the aedeagus cannot be compared) I have no doubts in the validity of this species.

2.28. *Laena hengduanica* **n. sp.** (Figs 160–163)

Holotype (♂): China, Yunnan, Hengduan Shan, part Baima, 4300 m, 23. VI.–2. VII. 1996 leg. V. Kubáň, CJTK.

Paratypes: Same data as holotype, 3 ex. CSBC, 2 ex. CJTK, 2 ex. SMNS. – China, W Sichuan, Gongga Shan, NE slope, 2500–3500 m, 8. VII. 1994 leg. D. Král & J. Farkač, 1 ex. CJTK.

Etymology: Named after the mountain range Hengduan Shan, where most of the types have been collected.

Description: Body length 7.2–7.7 mm. Eyes (Fig. 160) not reduced, not prominent. Shape of pronotum see Fig. 160, disc with dense and big punctures, distance

0.5–2 diameters, lateral punctures denser and bigger, all punctures with longer adpressed setae, surface with a pair of indistinct impressions (distinct in the single paratype from Sichuan) and shagreened, lateral margin unbordered or partly indistinctly bordered, basal margin unbordered and not bent downwards, posterior angles rounded, propleures with wider punctation and shorter setation as on disc. Elytra (Fig. 160) with rows of punctures without striae, these rows extinguished in posterior part, punctures of rows smaller as punctures on pronotum, each puncture with a very short seta, intervals with some scattered very small punctures bearing each a short seta, all intervals flat and shagreened, interval 9 with 2 setiferous pores. All femora in both sexes without teeth. All tibiae of males with finely hooked inner apex, posterior tibiae of males sligthly dilated in the distal part and medially armed with spines (Figs 161–162). Aedeagus see Fig. 163.

Diagnosis: *Laena hengduanica* n. sp. shares with *yufengsi,* also from Yunnan, the general body shape and size as well as the rough punctation of the pronotum without distinct lateral border, but can be separated by unarmed femora, by dull elytra with extinguished elytral rows in the posterior part and by wider parameters of the aedeagus. *Laena hengduanica* n. sp. can be separated from the other species with the posterior tibia medially armed with spines in males (*dickorei* n. sp., *gyamdaica* n. sp., *mulica* n. sp., *tryznai* n. sp.) by different shape of the pronotum, by different shape and structure of the elytra and by a different shape of the parameres.

2.29. *Laena hingstoni* Schuster 1926 (Figs 228–230)

Type locality: S Tibet, border to Sikkim, Jelap La, 3660m.

Studied type material: S Tibet, Jelap La, Tibetan side, 12.000 ft., 1. IV. 1924 leg. R. W. G. Hingston, holotype BMNH (male in bad condition, antennae and middle legs missing, tip of aedeagus (= joint parameres) broken and missing.

New material: Not seen.

Redescription: Body length 7.2 mm. Eyes (Fig. 228) not reduced, not prominent. Shape of pronotum see Fig. 228, disc scattered with small punctures, distance as 2–8 diameters, most punctures with long and erect setae, surface flat and shining, lateral margin bordered only in posterior part, basal margin indistinctly bordered and bent downwards, posterior angles rounded, propleures with sparser punctation as on disc and without setation. Elytra (Fig. 228) with rows of punctures without striae, punctures of rows distinctly bigger than punctures on pronotum, punctures without setation, intervals with a row of scattered small punctures bearing mostly a long and erect seta, all intervals sligthly convex and shining, interval 9 with 4 setiferous pores. All femora of males (females unknown) without teeth. All tibiae of males without peculiarities (Figs 229–230). Aedeagus unknown (aedeagus broken and joint parameres missing in the single type specimen).

Remarks: See under *Laena nyingchica* n. sp. (chapter 2.46.).

2.30. *Laena hongyuanica* **n. sp.** (Figs 10–13)

Holotype (♂): China, Sichuan, Hongyuan, 10 km SE Sanggarpar, 4200 m, 19. VII. 1995 leg. K. & B. Březina, CJTK.

Paratypes: Same data as holotype, 9 ex. CJTK, 4 ex. SMNS. – China, Sichuan, Barkam, VII. 1994 leg. M. Häckel, 2 ex. CSBC, 1 ex. SMNS.

Etymology: Named after the village Hongyuan, in whose vicinity most of the types have been collected.

Description: Body length 7.2–8.0 mm. Eyes (Fig. 10) reduced, not prominent. Shape of pronotum see Fig. 10, disc scattered with small punctures, distance as 2–5 diameters, all punctures without setae, surface flat and shining, lateral margin bordered, this border continues on distal and basal margins, basal margin not bent downwards, posterior angles subrectangular, propleures nearly without punctures. Elytra (Fig. 10) with rows of punctures in striae, punctures of rows bigger than punctures on pronotum, all punctures without setae, intervals with scattered punctures nearly as big as pronotal punctures and without setae, all intervals flat and shining, all intervals without setiferous pores. All femora in both sexes without teeth. All tibiae without distinct sexual dimorphism (Figs 11–12). Aedeagus see Fig. 13.

Diagnosis: See under *Laena hualongica* n. sp. (chapter 2.32.).

2.31. *Laena houzhenzica* **n. sp.** (Figs 224–227)

Holotype (♂): China, Shaanxi, Taibai Shan above Houzhenzi, 1300–1700 m, 9. VI.–3. VII. 1998 leg. P. Jäger & J. Martens, SMNS.

Etymology: Named after die village Houzhenzi, in whose vicinity the holotype has been collected.

Description: Body length 6.5 mm. Eyes (Fig. 224) not reduced, not prominent. Shape of pronotum see Fig. 224, disc with dense and big punctures, distance below 2 diameters or even punctures touching each other, all punctures with short setae, surface uneven and dull, disc with feeble longitudinal impression, lateral margin somewhat marked but without distinct border, basal margin unbordered and not bent downwards, posterior angles rounded, propleures with nearly the same punctation and setation as on disc. Elytra (Fig. 224) with rows of punctures without striae, punctures of rows as big as punctures on pronotum, each puncture with a short seta, intervals with irregular small punctation, the small punctures of the intervals bearing each a setae of same length, internal intervals flat and shining, interval 7 (and interval 9 in lesser extent) convex and nearly keel like in the posterior parts, interval 9 with 3 setiferous pores. All femora in both sexes without teeth but anterior femur of males medially with feeble granulation. All tibiae of males with distinctly hooked inner apex, posterior tibia medially with a broad tooth (Figs 225–226). Aedeagus see Fig. 227.

Diagnosis: *Laena houzhenzica* n. sp. shares with *bifoveolata* the rough punctation of the pronotum without a distinct lateral border and also the structure and dense setation on the elytral intervals, but can be separated by the medial tooth on the posterior tibia of the males and by the different shape of the aedeagus. The aedeagus of *houzhenzica* n. sp. is similar as in *fengileana* and *jizushana,* but these species have different proportions of elytra and pronotum and particularly different secondary sexual characters on the legs.

2.32. *Laena hualongica* **n. sp.** (Figs 6–9)

Holotype (♂): China, N Sichuan, Hualong 50 km NEE Songpan, 3500 m, 19. VI. 1992 leg. M. Bok, SMNS.

Paratypes: Same data as holotype, 14 ex. SMNS, 2 ex. BMNH. – China, N Sichuan, 50 km NEE Songpan, 3500 m, 19. VI. 1992 leg. J. Turna, 13 ex. CJTK. – China, N. Sichuan, Zhangla, 4200–4700 m, 9.–11. VII. 1991 leg. J. Kaláb, 2 ex. CJTK. – China, N Sichuan, pass between Zhangla and Songpan, 3200 m, VI. 1996 leg. M. Häckel, 4 ex. CJTK.

Etymology: Named after the village Hualong, in whose vicinity most of the types have been collected.

Description: Body length 6.8–7.5 mm. Eyes (Fig. 6) reduced, not prominent. Shape of pronotum see Fig. 6, disc scattered with small punctures, distance as 2–3 diameters, all punctures without setae, surface flat and shining, lateral margin bordered, this border continues on distal and basal margins, basal margin not bent downwards, posterior angles rounded, propleures nearly without punctures. Elytra (Fig. 6) with rows of punctures in striae, punctures of rows bigger than punctures on pronotum, all punctures without setae, intervals with scattered punctures nearly as big as pronotal punctures and without setae, all intervals flat and shining, all intervals without setiferous pores. All femora in both sexes without teeth. All tibiae without sexual dimorphism (Figs 7–8). Anterior tarsi of males dilated. Aedeagus see Fig. 9.

Diagnosis: *Laena benesi* n. sp., *hongyuanica* n. sp., *hualongica* n. sp., *nanpingica* n. sp. and *nomurai* n. sp. share some characters, which are quite unique within the genus as least in comparison with the numerous other Chinese species: Eyes reduced and kidney-like in lateral view or even completely reduced (*nanpingica* n. sp.), vertex of head with 2 long setae, anterior tarsi of males dilated and scutellum big and not covered by the pronotum. Actually, these striking characters are not considered as generic. These 5 species *benesi* n. sp., *hongyuanica* n. sp., *hualongica* n. sp., *nanpingica* n. sp. and *nomurai* n. sp. can be separated by the body size, by the shape of the pronotum and elytra and by the shape of the aedeagi (*nanpingica* n. sp. represented only by females) (see species key).

2.33. *Laena hubeica* **n. sp.** (Figs 69–72)

Holotype (♂): China, W Hubei, Shennongjia Nature Reserve, 2000–2200 m, 3.–8. VI. 1995 leg. S. Kurbatov, HNHM.

Paratypes: China, Hubei, Shennongjia Forest Reserve, 2000 m, 4.–8. VI. 1995 leg. A. Shamajev, 1 ex. CJTK, 1 ex. SMNS.

Etymology: Named after the province Hubei, where the types have been collected.

Description: Body length 7.8 mm. Eyes (Fig. 69) not reduced, not prominent. Shape of pronotum see Fig. 69, disc scattered with small punctures, distance as 1–4 diameters, most punctures with short setae, surface uneven and shining, basal part with longitudinal impression and disc with an additional pair of feeble impressions, lateral margin unbordered, basal margin feebly bordered and bent somewhat downwards, posterior angles rounded, propleures with wider punctation and shorter setation as on disc. Elytra (Fig. 69) with rows of punctures in striae, punctures of rows as big as punctures on pronotum, each puncture without distinct seta, intervals with a fine row of scattered very small punctures without setae, all intervals feebly convex and shining, interval 7 distinctly convex, interval 9 with 3 setiferous pores. All femora in both sexes with rounded teeth. Anterior tibiae of males dilated medially, posterior tibiae dilated medially in posterior third (Figs 70–71). Aedeagus see Fig. 72.

Diagnosis: *Laena hubei* n. sp. shares with *schusteri* and *tabanai* the body shape, the unbordered lateral margin of the pronotum, the more or less developed keel on the elytral interval 7 and the lacking of a distinct ponotal and elytral setation. These 3 species can be separated mainly by the different shape of the aedeagus and by the different modifications of the anterior and posterior tibiae in males (see figures and key).

2.34. *Laena jizushana* Masumoto 1996 (Figs 105–108)

Type locality: Yunnan, Jizu Shan, 2500–3100 m.

Studied type material: Yunnan, Jizu Shan, Binchuan Xian, 2650 m, 25. X. 1995 leg. Y. Watanabe, holotype NSMT. – Yunnan, Jizu Shan, 2500–3100 m, 30. V.–3. VI. 1993 leg. V. Kubáň, 1 paratype CSBC.

New material: Yunnan, Jizu Shan, 2300 m, 18.–20. VII. 1995, leg. Bolm, 2 ex. NHMB. – Yunnan, Diancang Shan above Dali, 2000–2200 m, 4.–17. IV. 1999 leg. W. Schawaller, 3 ex. SMNS.

Redescription: Body length 6.5–7.6 mm. Eyes (Fig. 105) not reduced, not prominent. Shape of pronotum see Fig. 105, disc with dense and big punctures, distance below 1 diameter or even punctures touching each other, all punctures with short setae, surface uneven and somewhat shining, base with a small unpunctured medial impression, lateral margin indistinctly bordered, basal margin unbordered and not bent downwards, posterior angles rounded, propleures with wider punctation and shorter setation as on disc. Elytra (Fig. 105) with rows of punctures in feeble striae, punctures of rows as big as punctures on pronotum, each puncture with a very short seta, intervals densely scattered with distinct punctures bearing each a somewhat longer seta, all intervals distinctly wrinkled by these punctures, all intervals convex and shining, interval 9 with 3 setiferous pores. All femora in both sexes with a distinct angle distally. All tibiae of males with finely hooked inner apex, posterior tibiae of males with a feeble mediodistal dilatation (Figs 106–107). Aedeagus see Fig. 108.

2.35. *Laena kangdingica* **n. sp.** (Figs 208–211)

Holotype (♂): China, Sichuan, Kangding Distr., Sade, 20. VII. 1992 leg. J. Schneider CSBC.

Paratypes: Same data as holotype, 6 ex. CSBC, 3 ex. SMNS. – China, W Sichuan, 20 km N Sabdê, 3200 m, 10.–16. VII. 1998 leg. J. Farcač, D. Král, J. Schneider & A. Smetana, 32 ex. NHMB, 8 ex. CJTK, 6 ex. CSBC, 10 ex. SMNS. – China, W Sichuan, temple 35 km N Sabdê, 3500–4300 m, 13.–14. VII. 1998 leg. J. Farcač & D. Král, 11 ex. CJTK, 2 ex. SMNS, 1 ex. NHMB.

Etymology: Named after the village Kangding, in whose vicinity the types have been collected.

Description: Body length 9.0–10.5 mm. Eyes (Fig. 208) not reduced, not prominent. Shape of pronotum see Fig. 208, disc laterally with big punctures and medially irregularly with small punctures, distance as 2–6 diameters, lateral punctures with very short setae, surface somewhat uneven and shining, basal part with longitudinal impression, lateral margin unbordered in distal part and irregularly bordered in basal part, basal margin unbordered and bent downwards, posterior angles rounded, propleures with same punctation as laterally on pronotum and without setation. Elytra (Fig. 208) with rows of punctures in indistinct striae, punctures of rows distinctly bigger than punctures on pronotum, all punctures without seta, intervals with an irregular row of scattered very small punctures, the small punctures of the intervals bearing each a very short seta, intervals medially flat and laterally (particularly interval 7) convex and shining, interval 9 with 3 setiferous pores. All femora in both sexes without teeth. Anterior tibiae of males medially with a feeble internal excavation, posterior tibiae of males with distinctly hooked inner apex and medially with a feeble internal dilatation (Figs 209–210). Aedeagus see Fig. 211.

Diagnosis: *Laena kangdingica* n. sp. shares with *gigantea* the big body size, the nearly naked dorsal surface, the number and position of setiferous pores of the elytral interval 9, the unarmed femora and the shape of the male posterior tibia, but can be separated by a rounder and more vaulted pronotum with smaller and scattered punctures on the disc and without a complete lateral border, by bigger punctures of the elytral rows in indistinct striae, by a nearly keel-like elytral interval 7, by a feeble excavation of the male anterior tibia and by a different shape of the aedeagus. See also *Laena zongdianica* n. sp. (chapter 2.70.).

2.36. *Leana kubani* n. sp. (Figs 21–24)

Holotype (♂): China, Yunnan, Haba Shan, SE slope, 2500–3500 m, 4.–5. VI. 1995 leg. S. Becvár, CSBC.

Paratypes: Same data as holotype, 4 ex. CSBC, 2 ex. SMNS. – China, Yunnan, Haba Shan, E slope, 3000–3800 m, 13.–17. VII. 1992 leg. V. Kubáň, 1 ex. CSBC.

Etymology: Named after Vít Kubáň (Brno), collector of several *Laena* species from China.

Description: Body length 7.0–9.0 mm. Eyes (Fig. 21) not reduced, not prominent. Shape of pronotum see Fig. 21, disc with dense and big punctures, distance as 0.5–1 diameters, all punctures with long setae, surface uneven and shining, disc with a pair of impressions and base with a weak impression medially, lateral margin unbordered, basal margin unbordered and not bent downwards, posterior angles rounded, propleures with wider but bigger punctation and shorter setation as on disc. Elytra (Fig. 21) with rows of punctures in indistinct striae, punctures of rows as big as punctures on pronotum, each puncture with a distinct seta, intervals with a dense punctation, all punctures bearing a short seta, all intervals flat and shining, interval 7 distinctly convex and nearly keel-like, somewhat swollen in the humeral region, interval 9 with 2 indistinct setiferous pores. All femora in both sexes with a distinct angle distally. Anterior tibiae of males with a parallel broadened anterior part (Figs 22–23). Aedeagus see Fig. 24.

Diagnosis: *Laena kubani* n. sp. is similar in body shape and size to *Laena chinensis,* also from Yunnan, and both share also the armed femora, but the pronotum is without lateral border, the elytral intervals possess a distinct punctation with short setation, and the aedeagus is different.

2.37. *Laena langmusica* n. sp. (Figs 196–199)

Holotype (♂): China, N Sichuan, Jiuzhaigou, 3100 m, 13.–15. VI. 1992 leg. M. Bok, SMNS.

Paratypes: China, N Sichuan, Langmusi, 3500–3600 m, 13. VII. 1994 leg. A. Smetana (C 14), 2 ex. MHNG, 1 ex. SMNS. – China, N Sichuan, Langmusi, 10.–12. VI. 1996 leg. Beneš & Štěpač, CSBC. – China, Sichuan, between Shuamaluko and Zhegushan pass, 3700 m, 24.–25. VI. 1996 leg. W. Heinz, 1 ex. CJTK. – China, N Sichuan/S Gansu, Zoigé, 3300–3700 m, 16.–20. VI. 1997 leg. B. Zvaric, 2 ex. CHBM, 1 ex. SMNS. – China, N Sichuan/S Gansu, Dogcanglhamo, 3500–4100 m, 13. VII. 1995 leg. K. & B. Březina, 2 ex. CJTK. – China, S Gansu, Luqu, Dogcanglhamo, 3500–4100 m, 13. VII. 1995 leg. M. Janata, 1 ♀ CSBC. – China, Shaanxi, Zhouzhi Co., Houzhenzi, 3200 m, 18.–25. VII. 1998 leg. V. Beneš, 1 ♂ CCBC. – China, Shaanxi, Qing Ling Shan, Hou Zen Zi (= Houzhenzi) to Taibai Shan, 3000 m, fir forest, 29. VI.–2. VII. 1998 leg. O. Šafránek & M. Trýzna, 1 ♂ SMNS. – China, Shaanxi, Qing Ling Shan, Hou Zen Zi (= Houzhenzi) to Taibai Shan, 3500 m, alpine meadows, 2.–4. VII. 1998 leg. Z. Jindra, O. Šafránek & M. Trýzna, 1 ex. CSBC.

Etymology: Named after the village Langmusi, in whose vicinity some of the types have been collected.

Description: Body length 6.8–8.0 mm. Eyes (Fig. 196) not reduced, not prominent. Shape of pronotum see Fig. 196, disc scattered with bigger punctures, distance as 1–5 diameters, most punctures with longer setae, surface uneven and shining, basal part with a feeble longitudinal impression and disc with an additional pair of feeble impressions, lateral margin indistinctly bordered, basal margin unbordered and bent downwards, posterior angles rounded, propleures with sparser punctation as on disc and without setation. Elytra (Fig. 196) with rows of punctures without striae, in a few specimens these rows partly extinguished in posterior part, punctures of rows as big as punctures on pronotum, punctures with a very short seta, intervals with a row of scattered small punctures bearing mostly a short seta of similar length, all intervals flat and shining, interval 9 with 3 setiferous pores. All femora in both sexes without teeth. All tibiae of males without distinct peculiarities, only posterior tibiae of males with finely hooked inner apex (Figs 197–198). Aedeagus see Fig. 199.

Diagnosis: See *Laena nyingchica* n. sp. (chapter 2.46).

2.38. *Laena leonhardi* Schuster 1916

Type localties: W Sinkiang, Aksu *(leonhardi)* and Kuldja (syn. *spaethi* Schuster 1916).

Remarks: This is the only species from the Central Asian Tien Shan area reaching western Xingjiang (= Sinkiang). For redescriptions of these Central Asian species including *leonhardi* see SCHAWALLER (1995).

2.39. *Laena ludingica* **n. sp.** (Figs 117–120)

Holotype (♂): China, W Sichuan, Ganzi Pref., Luding Co., W Erlang Shan Pass, 7 km SSE Luding, 2600 m, 20.–29. VI. 1999 leg. D. WRASE, NKME.

Paratypes: Same data as holotype, 3 ex. NKME, 1 ex. SMNS. – China, W Sichuan, Ganzi Pref., Luding Co., E Erlang Shan Pass, 9 km SE Luding, 2900 m, 20.–22. VI. 1999 leg. D. WRASE, 1 ex. SMNS.

Etymology: Named after the village Luding, in whose vicinity the types have been collected.

Description: Body length 5.5–6.2 mm. Eyes (Fig. 117) not reduced, not prominent. Shape of pronotum see Fig. 117, disc with big punctures, distance as 1–4 diameters, most punctures with long setae, surface somewhat uneven and shagreened, lateral margin unbordered, basal margin unbordered and not bent downwards, posterior angles rounded, propleures with somewhat wider punctation and similar setation as on disc. Elytra (Fig. 117) with rows of punctures without striae, punctures of rows as big as punctures on pronotum, each puncture with a long seta, intervals with a row of distinct punctures bearing each a seta of same length, all intervals nearly flat and shining, interval 7 with a setiferous pore basally, interval 9 with 4 setiferous pores. All femora in both sexes with distinct teeth. Anterior tibiae of males with a distinct mediobasal tooth, posterior tibiae of males without distinct modifications (Figs 118–119). Aedeagus see Fig. 120.

Diagnosis: *Laena ludingica* n. sp. can be recognized by the modified anterior tibia of males with a distinct mediobasal tooth, by the shape of the aedeagus, by the armed femora and by the longer setation on pronotum and elytra. *Laena fengileana* from Shaanxi and northern Sichuan has a similar body shape, a similar aedeagus and

also armed femora, but the shape of the pronotum is different and the anterior tibiae of males are without distinct modifications. *Laena schusteri* and *zongdianica* n. sp. possess a comparable modification of the anterior tibia in males, but most other characters (body size and shape, punctation and setation, aedeagus) are different.

2.40. *Laena luguica* **n. sp.** (Figs 97–100)

Holotype (♂): China, S Sichuan, 15 km NW Muli (Bowa), 3100 m, mixed forest, 30. VI. 1998 leg. J. Turna, CJTK.

Paratypes: China, Yunnan, Lugu Lake, Luo Shui, 8.–9. VII. 1992 leg. Bečvář, 1 ♀ CSBC, 1 ♀ SMNS. – China, Yunnan, Zongdian, 17.–19. VI. 1995 leg. E. Kučera, 1 ♀ CSBC. – China, NW Yunnan, 20 km E Weixi, Yunling Shan, 3300 m, 12. VIII. 1996 leg. A Miroshnikov & A. Zamatajlov, 1 ♀ ZIP. – China, Yunnan, Hutiao gorge, Jinsha, 2000 m, 18.–22. VII. 1992 leg. V. Kubáň, 1 ex. CJTK.

Etymology: Named after the lake Lugu, in whose vicinity some of the types have been collected.

Description: Body length 4.8–6.0 mm. Eyes (Fig. 97) not reduced, not prominent. Shape of pronotum see Fig. 97, disc scattered with big punctures, distance as 2–5 diameters, all punctures with long setae, surface flat and shining, lateral margin bordered, basal margin unbordered and not bent downwards, posterior angles rounded, propleures with more scattered punctures and shorter setation as on disc. Elytra (Fig. 97) with rows of punctures in feeble striae, punctures of rows as big as punctures on pronotum, most punctures with a long erect seta, intervals with an irregular row of small punctures bearing each a setae of same length, all intervals flat and shining, interval 9 with 4 indistinct setiferous pores. All femora in both sexes with distinct teeth. Posterior tibiae of males with finely hooked inner apex (Figs 98–99). Aedeagus see Fig. 100.

Diagnosis: *Laena luguica* n. sp. is of similar body shape and size as *alticola* and *parallelocollis,* both from Tibet, but can be separated by the armed femora, by the longer and erect setation of pronotum and elytra, as well by the shape of the aedeagus with wide and short parameres.

2.41. *Laena luhuoica* **n. sp.** (Figs 251–254)

Holotype (♂): China, NW Sichuan, road Luhuo to Sêrtar, pass 35 km NNE Luhuo, 3000–3500 m, *Thuya/Picea* forest, 29. VII. 1994 leg. J. Turna, CJTK.

Paratypes: Same data as holotype, 1 ex. CJTK, 1 ex. SMNS.

Etymology: Named after the village Luhuo, in whose vicinity the types have been collected.

Description: Body length 4.5–6.0 mm. Eyes (Fig. 251) not reduced, not prominent. Shape of pronotum see Fig. 251, disc with dense and big punctures, punctures confluent or distance below 1 diameter, all punctures with longer setae, surface uneven and shagreened, disc with a longitudinal impression and an additional pair of small impressions, lateral margin marked but unbordered, basal margin unbordered and not bent downwards, posterior angles rounded, propleures with sparser punctation and shorter setation as on disc. Elytra (Fig. 251) with rows of punctures without striae, punctures of rows as big as punctures on pronotum, each puncture with a short seta, intervals with an indistinct row of small punctures bearing each a distinctly longer seta, intervals 1–4 flat and shagreened, interval 5 weakly and interval 7 distinctly convex, interval 9 with 3 indistinct setiferous pores. All femora in both

sexes without teeth. Posterior tibiae of males with finely hooked inner apex (Figs 252–253). Aedeagus see Fig. 254.

Diagnosis: *Laena luhuoica* n. sp. with *wrasei* n. sp., also from Sichuan, the small body size and shape, and the shape of the pronotum with the same pattern of impressions, but can be separated by the dull surface, by the flat inner elytral intervals and distinctly convex intervals 5 and particularly 7, and by longer parameres of the aedeagus.

2.42. *Laena mirabilis* Kaszab 1970

Type locality: Sichuan, Ta-tsien-Lou (Tatsienlu = Kangding).
Studied type material: None.
New material: Not seen.

Remarks: See also *Laena yajiangica* n. sp. (chapter 2.65.).

2.43. *Laena mulica* **n. sp.** (Figs 37–40)

Holotype (♂): China, S Sichuan, 20 km S Muli (Bowa), 3500m, 29. VI. 1998 leg. M. Bocák, SMNS.

Paratype: Same data as holotype, 1 ex. SMNS. – China, S Sichuan, 30 km NW Muli (Bowa), 3500 m, mixed forest, 1.–2. VII. 1998 leg. J. Turna, 2 ex. CJTK.

Etymology: Named after the village Muli, in whose vicinity the types have been collected.

Description: Body length 8.8–9.5 mm. Eyes (Fig. 37) not reduced, not prominent. Shape of pronotum see Fig. 37, disc irregularly punctured, punctures laterally denser but not bigger than medially, distance as 1–4 diameters, all punctures with short setae, surface uneven and shining, disc and base with a few irregular impressions, lateral margin marked but not distinctly bordered, basal margin unbordered and bent downwards, lateral margin ending basally in an upper level than basal margin, propleures with wider punctation and shorter setation as on disc. Elytra (Fig. 37) with rows of punctures without striae, punctures of rows as big as punctures on pronotum, each puncture without distinct seta, intervals with dense and irregular punctation, punctures bearing sometimes a very short seta, all inner intervals flat and shining, interval 7 keel-like with knob-like humeral base, intervals 8–9 vertical and not to be seen from dorsal, interval 9 with 3 setiferous pores. All femora in both sexes without teeth. Anterior tibiae of males nearly unmodified, posterior tibiae of males in the distal part medially with distinct dentation (Figs 38–39). Aedeagus see Fig. 40.

Diagnosis: *Laena mulica* n. sp. belongs to the group around *mirabilis* and possesses a similar pronotum without indistinct lateral border, but can be recognized by unarmed femora, by the elytral intervals with dense punctation, by the keel-like interval 7 with knob-like humeral base, by the vertical intervals 8–9 and by the shape of the aedeagus (aedeagus unknown in *mirabilis*). See under *Laena haigouica* n. sp. (chapter 2.26.).

2.44. *Laena nanpingica* **n. sp.** (Figs 14–16)

Holotype (♀): China, N Sichuan, Nanping, 3500 m, 10.–19. VI. 1997 leg. S. MURZIN, CJTK.

Paratype: Same data as holotype, 1 ♀ SMNS.

Etymology: Named after the village Nanping, in whose vicinity the types have been found.

Description: Body length 7.2–7.4 mm. Eyes (Fig. 14) completely reduced to a small lighter spot without ocelli. Shape of pronotum see Fig. 14, disc scattered with small punctures, distance as 2–4 diameters, most punctures without setae but 2–3 lateral punctures with a longer seta, surface flat and shining, lateral margin bordered, this border continues on distal and basal margins, basal margin not bent downwards, posterior angles subrectangular, propleures nearly without punctures. Elytra (Fig. 14) with rows of punctures in striae, punctures of rows as big as punctures on pronotum, all punctures without setae, intervals with an irregular row of small punctures, a few punctures particularly laterally and basally bearing a long and erect seta, all intervals flat and shining, all intervals without setiferous pores. All femora in females (males unknown) without teeth. Sexual dimorphism of tibiae unknown (Figs 15–16). Aedeagus unknown.

Diagnosis: Although only 2 females are available, these specimens are considered as a distinct species to be recognized by relatively long and parallel elytra and particulary by completely reduced eyes. See under *Laena hualongica* n. sp. (chapter 2.32.).

2.45. *Laena nomurai* **n. sp.** (Figs 2–5)

Holotype (♂): China, N Sichuan, Jiuzhaigiu, 3100 m, 13.–15. VI. 1992 leg. M. BOK, SMNS.

Paratypes: China, N Sichuan, 30 km W Nanping, 3100 m, Jiuzhaigiu, 13.–15. VI. 1992 leg. J. TURNA, 2 ex. CJTK, 1 ex. SMNS. – China, Sichuan, pass between Zhangla and Hualong, 3200–3400 m, 27.–28. VI. 1996 leg. W. HEINZ, 1 ex. CJTK. – China, N Sichuan, Nanping, 3500 m, 10.–19. VI. 1997 leg. S. MURZIN, 3 ex. CJTK, 1 ex. SMNS.

Etymology: Named after Dr. SHÛHEI NOMURA (Tokyo), who kindly loaned several types from the National Science Museum.

Description: Body length 8.3 mm. Eyes (Fig. 2) reduced, not prominent. Shape of pronotum see Fig. 2, disc scattered with small punctures, distance as 2–3 diameters, all punctures without setae, surface flat and shining, lateral margin bordered and crenulated in posterior part, this border continues on distal and basal margins, basal margin not bent downwards, posterior angles subrectangular, propleures nearly without punctures. Elytra (Fig. 2) with rows of punctures in striae, punctures of rows bigger than punctures on pronotum, all punctures without setae, intervals with scattered punctures nearly as big as pronotal punctures and without setae, all intervals flat and shining, all intervals without setiferous pores. All femora in both sexes without teeth. All tibiae without sexual dimorphism. Anterior tarsi of males dilated (Figs 3–4). Aedeagus see Fig. 5.

Diagnosis: See under *Laena hualongica* n. sp. (chapter 2.32.).

2.46. *Laena nyingchica* **n. sp.** (Figs 216–219)

Holotype (♂): E Tibet, NE Nyingchi, 3700–4500 m, 23.–25. VII. 1992, leg. L. & R. Businský, CJTK.

Paratypes: Same data as holotype, 6 ex. CJTK, 5 ex. SMNS. – E Tibet, Mts. N Nyingchi, 3900–4600 m, 19.–28. VI. 1996 leg. L. & R. Businský, 1 ex. CSBC. – E Tibet, Bomi, 3000 m, mixed forest, 9.–10. VII. 1997 leg. J. Turna, 4 ex. CJTK. – E Tibet, Bomi, 2700 m, 14. VII. 1992 leg. L. & R. Businský, 1 ex. CJTK.

Etymology: Named after the village Nyingchi, in whose vicinity most of the types have been collected.

Description: Body length 6.0–8.0 mm. Eyes (Fig. 216) not reduced, not prominent. Shape of pronotum see Fig. 216, disc scattered with small punctures, distance as 2–4 diameters, most punctures with longer setae, surface uneven and shining, basal part with a feeble longitudinal impression, lateral margin bordered, basal margin bordered and not bent downwards, posterior angles rounded, propleures with wider and smaller punctation and shorter setation as on disc. Elytra (Fig. 216) with rows of punctures without striae, these rows completely extinguished or at least with finer punctures in posterior part, punctures of rows as big as punctures on pronotum, a few punctures with a very short seta, intervals with an irregular scattered row of very small punctures or nearly without visible punctures, bearing basally a relatively long seta, medial intervals flat and lateral intervals slightly convex and shining, interval 9 with 3 indistinct setiferous pores. All femora in both sexes without teeth. All tibiae of males without distinct modifications (Figs 217–218). Aedeagus see Fig. 219.

Diagnosis: *Laena nyingchica* n. sp. from Tibet and *langmusica* n. sp. (distributed in N Sichuan, S Gansu, W Shaanxi) are quite similar in body shape and structure, but *nyingchica* n. sp. has a wider pronotum with distinct lateral border, posteriorly somewhat dilated elytra with indistinct setiferous pores and somewhat wider parameres. In the same group belongs *hingstoni* from southern Tibet, but *hingstoni* has a rounder and even pronotum with very fine punctation (the aedeagus of *hingstoni* is unknown, parameres missing in male holotype).

2.47. *Laena ovipennis* Schuster 1926

Type locality: Near Hong Kong, Da-laen-saen near Nong-po.
Studied type material: None.
New material: Not seen.

2.48. *Laena paomaica* **n. sp.** (Figs 255–258)

Holotype (♂): China, W Sichuan, Daxue Shan, Paoma Shan near Kangding, 2700–2900 m, 22. V. 1997 leg. M. Schülke, CJTK.

Paratypes: Same data as holotype, 3 ex. CJTK, 2 ex. SMNS. – China, W Sichuan, Daxue Shan, E Tsheto La W Kangding, 3500 m, 25. V. 1997 leg. M. Schülke, 3 ex. CJTK, 3 ex. SMNS. – China, W Sichuan, Daxue Shan, 5 km W Tsheto La, 3900–4000 m, 26. V. 1997 leg. M. Schülke, 3 ex. CJTK. – China, W Sichuan, Daxue Shan, Mugecuo NW Kangding, 3200–3400 m, 21. V. 1997 leg. M. Schülke, 2 ex. CJTK. – China, Sichuan, Ganzi Pref., Daxue Shan, Mugecuo 26 km NW Kangding, 3200–3400 m, 21. V. 1997 leg. A. Pütz, 3 ex. CAPE, 1 ex. SMNS. – China, W Sichuan, Daxue Shan, 5 km E Kangding, 2500–2800 m, 23. V. 1997 leg. M. Schülke, 1 ex CJTK. – China, W Sichuan, Ganzi Pref., Daxue Shan, 10 km S Kangding, 3150 m, 26.–30. VI 1999 leg. D. Wrase, 1 ex. NKME. – China, Sichuan, Kangding, 3000–3100 m, 21.–22. VII. 1994 leg. W. Heinz, 1 ex. CJTK. – China, W Sichuan, Ganzi Pref., Shalui Shan, 6 km WSW Yajiang, 3250 m, 4. VII. 1995 leg. D. Wrase, 1 ex. NKME.

Etymology: Named after the mountain range Paoma Shan, where some of the types including the holotype have been collected.

Description: Body length 4.0–5.0 mm. Eyes (Fig. 255) not reduced, not prominent. Shape of pronotum see Fig. 255, disc scattered with big punctures, distance as 1–4 diameters, most punctures with longer setae, surface flat or indistinctly uneven and shagreened, lateral margin bordered, basal margin unbordered and not bent downwards, posterior angles rounded, propleures with sparser punctation and shorter setation as on disc. Elytra (Fig. 255) with rows of punctures without striae, punctures of rows as big as punctures on pronotum, most punctures with a short seta, intervals with an irregular row of punctures half as big as those of the rows bearing each a setae of same length, all intervals flat and shining, interval 9 with 3 indistinct setiferous pores. All femora in both sexes without teeth. All tibiae without distinct sexual dimorphism (Figs 256–257). Aedeagus see Fig. 258.

Diagnosis: *Laena paomaica* n. sp. is quite similar in body shape, unarmed and unmodified legs to *alticola* from southern Tibet, but can be separated mainly by the shape of the aedeagus with wider spade-like parameres, as well as by a somewhat shorter body length and by somewhat narrower pronotum. *Laena zogqenica* n. sp. from NW Sichuan belongs in the same group and has a similar aedeagus as *paomaica* n. sp., however its pronotum is distinctly different with a cordiform shape and with a quite narrow base.

2.49. *Laena parallelocollis* Schuster 1926 (Figs 168–171)

Type locality: S Tibet, Everest Expedition, Kampa Dzong, 4570 m.

Studied type material: Tibet, Kampa Dzong, 15.000 ft., 17. VII. 1924 leg. R. W. G. Hingston, holotype BMNH.

New material: Tibet, Yalung La between Shigatse and Lhatse, 4500 m, 1. VIII. 1998 leg. O. Jäger, 1 ex. SMTD, 1 ex. SMNS. – Tibet, Pass between Lhatse and Shegar, 5250 m, 2. VIII. 1998 leg. O. Jäger, 1 ex. SMTD. – Tibet, Yamtso bank near Nagartze, 4450 m, 29. VII. 1998 leg. O. Jäger, 1 ex. SMTD.

Redescription: Body length 4.5–6.0 mm. Eyes (Fig. 168) not reduced, not prominent. Shape of pronotum see Fig. 168, disc scattered with small punctures, distance as 2–6 diameters, lateral punctures with long setae, surface flat and shagreened, lateral margin bordered, basal margin unbordered and not bent downwards, posterior angles somewhat marked, propleures with more scattered and bigger punctures and same setation as on disc. Elytra (Fig. 168) with rows of punctures without striae, punctures of rows as big as punctures on pronotum, most punctures with a short seta, intervals with an irregular scattered row of very small punctures bearing each a setae of same length, all intervals flat and shining, interval 9 with 3 indistinct setiferous pores. All femora in both sexes without teeth. All tibiae without distinct sexual dimorphism (Figs 169–170). Aedeagus see Fig. 171.

Remarks: See also under *alticola* (chapter 2.1.) and *zogqenica* n. sp. (chapter 2.70.).

2.50. *Laena puetzi* **n. sp.** (Figs 235–238)

Holotype (♂): China, Sichuan, Ganzi Pref., Daxue Shan, 7 km W Kangding, 3150 m, 25.–26. V. 1997 leg. A. Pütz, CAPE.

Paratypes: Same data as holotype, 1 ♀ SMNS. – China, Sichuan, Ganzi Pref., Daxue Shan, Mugecuo, 26 km NW Kangding, 3200–3400 m, 21. V. 1997 leg. A. Pütz, 1 ♀ CAPE. –

China, Sichuan, Kangding Distr., Hugezo lake, 4500 m, 16.–19. VII. 1992 leg. R. DUNDA, 1 ♀ CSBC. – China, W Sichuan, road Xinduqiao to Yajiang, pass 16 km W Xinduqiao, 3500 m, alpine region, 1. VII. 1994 leg. J. KALÁB, 1 ex. CJTK. – China, NW Sichuan, road Luhuo to Sêrtar, pass 35 km NNE Luhuo, 3500–4000 m, alpine region, 27.–28. VII. 1994 leg. J. TURNA, 1 ex. CJTK. – China, W Sichuan, temple 35 km N Sabdê, 3500–4300 m, 13.–14. VII. 1998 leg. J. FARCAČ, 1 ex. NHMB. – China, W Sichuan, Barkam, VII. 1994 leg. M. HÄCKEL, 1 ex. CSBC, 1 ex. SMNS.

Etymology: Named after ANDREAS PÜTZ (Eisenhüttenstadt), collector of the holotype and other *Laena* species from China.

Description: Body length 8.5–10.0 mm. Eyes (Fig. 235) not reduced, not prominent. Shape of pronotum see Fig. 235, disc with dense and big punctures, distance as 1–2 diameters, all punctures with short setae, surface uneven and shining, disc with feeble longitudinal impression and with an additional pair of feeble impressions, lateral margin unbordered, basal margin unbordered and not bent downwards, posterior angles rounded, propleures with wider punctation and shorter setation as on disc. Elytra (Fig. 235) with rows of punctures in striae, punctures of rows as big as punctures on pronotum, each puncture with a short seta, intervals with distinct irregular punctation and transverse wrinkles, the small punctures of the intervals bearing each a setae of same length, internal intervals flat and shining, interval 7 (and interval 9 in lesser extent) distinctly convex and nearly keel like, interval 9 with 3 setiferous pores. All femora in both sexes without teeth. Anterior tibiae of males with broadened medial part and with excavation before inner apex, posterior tibiae in males with hooked inner apex (Figs 236–237). Aedeagus see Fig. 238.

Diagnosis: *Laena puetzi* n. sp. shares with *bifoveolata* from Shaanxi and Hubei the body shape and size, the dense punctation on the pronotum without lateral border and the distinct punctation with short setation on the elytral intervals, but can be separated by a different aedeagus and by differently modified anterior tibiae in males. *Laena kangdingica* n. sp. from the same area and *xuerensis* from Yunnan possess similar modified anterior tibiae in males, but the aedeagi are different and the elytral intervals bear, if any, only scattered and very small punctures.

2.51. *Laena qinlingica* **n. sp.** (Figs 109–112)

Holotype (♂): China, Shaanxi, Qin Ling Shan, road 93 km S Zhouzi, 108 km SW Xian, 1650 m, mountainous forest, 1.–2. IX. 1995 leg. D. WRASE, CJTK.

Paratypes: China, Shaanxi, Taibai Shan above Houzhenzi, 1700–2600 m, 9. VI.–3. VII. 1998 leg. P. JÄGER & J. MARTENS, 1 ♀ SMNS. – China, W Sichuan, Daxue Shan, W Kangding, 2700–2800 m, 24. V. 1997 leg. M. SCHÜLKE, 1 ♀ SMNS.

Etymology: Named after the mountain range Qin Ling Shan, where the holotype has been collected.

Description: Body length 5.3–5.5 mm. Eyes (Fig. 109) not reduced, not prominent. Shape of pronotum see Fig. 109, disc scattered with small punctures, distance as 1–4 diameters, all punctures with long and erect setae, surface slightly uneven and shagreened, lateral margin unbordered, basal margin unbordered and not bent downwards, posterior angles rounded, propleures with similar punctation and setation as on disc. Elytra (Fig. 109) with rows of punctures without striae, punctures of rows as big as punctures on pronotum, each puncture with a long and erect seta, intervals with a row of scattered and very small punctures bearing each a seta of same length, all intervals nearly flat and shagreened, interval 9 with 3 indistinct setiferous

pores. All femora in both sexes without teeth. Posterior tibiae of males slightly broadened medially (Figs 110–111). Aedeagus see Fig. 112.

Diagnosis: *Laena qinlingica* n. sp. and *fengileana,* also from Shaanxi, are similar and share body size, the proportions of pronotum and elytra, the unbordered lateral margin of pronotum and the distinct femoral tooth. *Laena qinlingica* n. sp. can be separated by a distinctly different aedeagus with narrow parameres, by a longer erect setation and shagreened surface as well as by a finer punctation of the pronotum and elytra.

2.52. *Laena safraneki* **n. sp.** (Figs 136–139)

Holotype (♂): SE Tibet, "Chola Shan" pass, road Yanjing to Markam, 50 km S Markam, 4400 m, alpine meadows, 24.–27. VI. 1997 leg. M. Trýzna, CSBC.

Paratypes: Same data as holotype, 81 ex. CSBC, 18 ex. SMNS, 2 ex. BMNH. – SE Tibet, "Chola Shan" pass, road Yanjing to Markam, 50 km S Markam, 4400 m, alpine meadows, 24.–27. VI. 1997 leg. M. Trýzna & O. Šafránek, 55 ex. CSBC. – SE Tibet, "Chola Shan" pass, road Yanjing to Markam, 50 km S Markam, 4400 m, alpine meadows, 24.–27. VI. 1997 leg. J. Turna, 35 ex. CJTK. – SE Tibet, "Chola Shan" pass, road Yanjing to Markam, 50 km S Markam, 4200 m, alpine meadows, 26.–29. VI. 1998 leg. M. Trýzna & O. Šafránek, 12 ex. CSBC. – E Tibet, Markam, 4000 m, 3. VII. 1992 leg. L. & R. Businský, 8 ex. CJTK. – E Tibet, "Lao Shan" pass, road Markam to Zogang, 10 km W Markam, 4300 m, alpine meadow, 27.–28. VI. 1997 leg. J. Turna, 1 ex. CJTK.

Etymology: Named after Ondřej Šafránek (Praha), collector of several *Laena* species from China.

Description: Body length 5.0–7.5 mm. Eyes (Fig. 136) not reduced, not prominent. Shape of pronotum see Fig. 136, disc scattered with punctures, distance as 1–4 diameters, all punctures with longer setae, surface flat and shagreened, lateral margin bordered, basal margin unbordered and not bent downwards, posterior angles rounded, propleures with sparser punctation and same setation as on disc. Elytra (Fig. 136) with rows of punctures without striae, punctures of rows as big as punctures on pronotum, most punctures with a very short seta, intervals with several distinct punctures bearing each a seta of same length, all intervals flat and shagreened, interval 9 with 3 indistinct setiferous pores. All femora in both sexes without teeth. Anterior tibiae of males medially distinctly sinuated, middle and posterior tibiae of males with dilated apex and medially excavated and with granules (Figs 137–138). Aedeagus see Fig. 139.

Diagnosis: *Laena safraneki* n. sp. is similar to *cholanica* n. sp. from the same localities, but can be separated by denser punctation on the pronotum and elytral intervals, and particularly by the distinct sexual dimorphism of the tibiae in males and by the different shape of the aedeagus.

2.53. *Laena schuelkei* **n. sp.** (Figs 49–52)

Holotype (♂): China, W. Sichuan, Ganzi Pref., Luding Co., W Erlang Shan Pass, 7 km SSE Luding, 2600 m, 20.–29. VI. 1999 leg. D. Wrase, NKME.

Paratypes: China, W Sichuan, 5 km E Kangding, Daxue Shan, 2500–2800 m, 23. V. 1997 leg. M. Schülke, 2 ex. CJTK. – China, W Sichuan, W Kangding, Daxue Shan, 2700–2800 m, 24. V. 1997 leg. M. Schülke, 1 ex. SMNS.

Etymology: Named after Michael Schülke (Berlin), collector of some *Laena* species from China.

Description: Body length 7.1 mm. Eyes (Fig. 49) not reduced, not prominent. Shape of pronotum see Fig. 49, disc scattered with big punctures, punctures laterally somewhat denser and bigger than medially, distance as 0.5–3 diameters, most punctures with short setae, surface uneven and shagreened, disc with a pair of distinct impressions and with a longitudinal impression, lateral margin distinctly marked but not bordered, basal margin unbordered and not bent downwards by the basal impression, propleures with wider punctation and shorter setation as on disc. Elytra (Fig. 49) with rows of punctures without striae, punctures of rows distinctly bigger than punctures on pronotum, most punctures with very short seta, intervals with scattered fine punctation, punctures bearing a very short seta, inner intervals flat but uneven and shining, interval 3 slightly elavated, interval 7 keel-like, intervals 8–9 vertical but lateral margin to be seen from dorsal, interval 9 with 1 setiferous pore. All femora in males (females unknown) without teeth. All tibiae of males nearly unmodified, posterior tibiae with a finely hooked inner apex (Figs 50–51). Aedeagus see Fig. 52.

Diagnosis: See under *Laena yajiangica* n. sp. (chapter 2.65.).

2.54. *Laena schusteri* (Heller 1923) (Figs 188–191)

Psilolaena Heller 1923 **n. syn.** *schusteri* **n. comb.**

Type locality: Sichuan (exact locality unknown).

Studied type material: Sichuan, Waschan (= Wa Shan?, where ?), holotype SMTD.

New material: Sichuan, Waschan, 1 ♀ SMTD (not labelled as paratype). – Sichuan, Omei Shan, 1 ♀ HNHM. – Sichuan, Emei Shan, above Thunder Cave, 2500–2600 m, 18. V. 1996 leg. W. Heinz, 1 ex. CJTK. – Sichuan, Emei Shan, Leidongping, 2500 m, 18. VII. 1996 leg. J. Farkač, P. Kabátek & A. Smetana, 2 ex. NHMB, 1 ex. SMNS.

Redescription: Body length 6.5–8.8. mm. Eyes (Fig. 188) not reduced, not prominent. Shape of pronotum see Fig. 188, disc scattered with small punctures, distance as 1–4 diameters, some punctures with short setae, surface uneven and shining, basal part with longitudinal impression and disc with an additional pair of feeble impressions, lateral margin unbordered, basal margin bordered and bent downwards, posterior angles rounded, propleures with wider punctation and shorter setation as on disc. Elytra (Fig. 188) with rows of punctures in striae, punctures of rows as big as punctures on pronotum, each puncture without distinct seta, intervals with fine scattered very small punctures without setae, all intervals feebly convex and shining, interval 7 distinctly convex and nearly keel-like, interval 9 with 3 setiferous pores. All femora in both sexes without teeth. Anterior tibiae of males with a distinct tooth medially, posterior tibiae feebly sinuated (Figs 189–190). Aedeagus see Fig. 191.

Synonymy: Heller (1923) separated the genus *Psilolaena* from *Laena* s. str. mainly by the existence of setiferous pores on the elytral intervals and by the modified anterior tibiae of males of the single species *schusteri.* These differences, however, reflect only species characters and do not justify any generic separation. Consequently, *Psilolaena* Heller 1923 is considered as a junior synonym of *Laena* Latreille 1822, and *schusteri* Heller 1923 n. comb. is a valid species within *Laena.*

This newly established synonymy requires a further change of names. *Laena schusteri* Kaszab 1938 from Darjeeling (type locality erroneously published as "South India") is a junior homonym and is herewith replaced by *Laena adriani* **n. nom.** This taxon should not be confused with the different and valid taxon *Laena schusteriana* Kaszab 1973 from Nepal.

2.55. *Laena shaluica* **n. sp.** (Figs 77–80)

Holotype (♂): China, W Sichuan, Ganzi Pref., Yajiang Co., Shalui Shan, river valley 6 km WSW Yajiang, 3250 m, 4. VII. 1999 leg. D. Wrase, NKME.

Paratype: Same data as holotype, 1 ♀ SMNS.

Etymology: Named after the mountain range Shalui Shan, where the types have been collected.

Description: Body length 9.3–9.6 mm. Eyes (Fig. 77) not reduced, not prominent. Shape of pronotum see Fig. 77, disc with dense and big punctures, distance as 0.5–2 diameters, most punctures with long and erect setae, surface even and shining, disc with a shallow longitudinal impression, lateral margin without distinct border but somewhat marked, basal margin unbordered and not bent downwards, posterior angles rounded, propleures with a wider punctation and shorter setation as on disc. Elytra (Fig. 77) with dense and big punctation on the intervals, so the elytral rows are indistinct, these rows of punctures in striae, punctures of rows smaller than punctures on pronotal disc, each puncture with a long and erect seta, intervals with dense and sometimes confluent punctation, these punctures bigger as the punctures of the rows, each puncture bearing a similar long seta as punctures of the rows, all intervals flat but somewhat uneven because of the dense punctation of the intervals and shining, all intervals without distinct setiferous pores. All femora in both sexes with teeth. Anterior tibiae of males with broad parallel distal part, posterior tibiae of males without distinct modifications (Figs 78–79). Aedeagus see Fig. 80.

Diagnosis: *Laena shaluica* n. sp. shares with *deqenica* n. sp. the body size and shape and the dense punctation of the elytral intervals so that the intervals cannot be separated from the elytral rows, but it can be separated by the long and erect setation of pronotum and elytra, by armed femora and by a different aedeagus. The aedeagus of *shaluica* n. sp. is similar the one of *becvari* n. sp. and also the longer and erect dorsal setation is similar in both species, but *shaluica* n. sp. can be separated by the armed femora and by the dense punctation of the elytral intervals.

2.56. *Laena smetanai* **n. sp.** (Figs 65–68)

Holotype (♂): China, Sichuan, Gongga Shan, lake above camp 2, 2750 m, 25. VII. 1994 leg. A. Smetana (C 23), MHNG.

Paratypes: China, Sichuan, Gongga Shan, Hailuogou above camp 2, 2600–2750 m, 3.–6. VII. 1998 leg. J. Farkač & D. Král, 1 ex. NHMB, 1 ex. SMNS. – China, W Sichuan, Zheduo Shankou Pass W Kangding, W slope, 4000 m, 17.–18. VII. 1998 leg. J. Schneider, 1 ex. CSBC.

Etymology: Named after Dr. Aleš Smetana (Ottawa), collector of some *Laena* species in China.

Description: Body length 6.2–7.5 mm. Eyes (Fig. 65) not reduced, not prominent. Shape of pronotum see Fig. 65, disc scattered with big punctures, distance as 1–5 diameters, all punctures with short setae, surface uneven and shining, lateral margin unbordered, basal margin unbordered and bent downwards, posterior angles rounded, propleures with sparser punctation as on disc and without setation. Elytra (Fig. 65) with rows of punctures without striae, these rows partly extinguished in posterior part, punctures of rows as big as punctures on pronotum, punctures without setation, intervals unpunctured and without any setation, all intervals flat and shining, interval 9 with 3 setiferous pores. All femora in both sexes with distinct teeth. All tibiae without distinct sexual dimorphism (Figs 66–67). Aedeagus see Fig. 68.

Diagnosis: *Laena smetanai* n. sp. shares with *emeishana* from Sichuan the posteriorly extinguished elytral rows, but differs by the bigger body size, by the structure of the pronotum with the basal margin bent downwards, by the armed femora and by the shape of the aedaegus. See also *Laena ganzica* n. sp. (chapter 2.21.).

2.57. *Laena tabanai* Masumoto 1998 (Figs 61–64)

Type locality: Sichuan, Luotiao Shan, 2900 m.

Studied type material: Sichuan, Luotiao Shan, Puge Xien, 2900 m, 22. X. 1996 leg. M. Tabana, holotype NSMT (label in Japanese).

New material: S Sichuan, Luoji Shan, 2200–2800 m, 16.–25. VII. 1996 leg. S. Kasantsev, 1 ex. NHMB. – Sichuan, Luoji Shan, Puge Xian, X. 1996 leg. M. Tanikado, 3 ex. NSMT, 1 ex. SMNS. – S Sichuan, Daliang Shan, Zhaojue, pass Xichang to Meigu, 12.–14. VI. 1998 leg. M. Trýzna, 1 ex. CSBC. – S Sichuan, 20 km S Muli (Bowa), 3500 m, 29. VI. 1998 leg. M. Bocák, 1 ex. SMNS.

Redescription: Body length 8.0–9.5 mm. Eyes (Fig. 61) not reduced, not prominent. Shape of pronotum see Fig. 61, disc scattered with small punctures, distance as 1–3 diameters, most punctures with short setae, surface nearly even and shining, disc with a very feeble longitudinal impression and with an additional pair of feeble impressions, lateral margin unbordered, basal margin unbordered and somewhat bent downwards, posterior angles rounded, propleures with wider punctation as on disc and without setation. Elytra (Fig. 61) with rows of punctures in distinct striae, punctures of rows as big as punctures on pronotum, each puncture without distinct seta, intervals with scattered smaller punctures also without setae, all intervals convex and shining, interval 9 with 3 setiferous pores. All femora in both sexes with teeth. Anterior tibiae of males with a distinctly broadened anterior part, medial margin granulated; posterior tibiae of males medially with a distinct tooth (Figs 62–63). Aedeagus see Fig. 64.

Remarks: The single specimen from S Muli is a huge male (9.5 mm) with a wider pronotum without a pair of impressions on the disc, with wider anterior tibia and with a wider and shorter basal piece of the aedeagus, but shares with the holotype the striking broad joint parameres and the distinct medial tooth at the posterior tibia. The differences seem to reflect only infraspecific variations. See also *Laena hubeica* n. sp. (chapter 2.33.).

2.58. *Laena tryznai* **n. sp.** (Figs 180–183)

Holotype (♂): SE Tibet, "Chola Shan" pass, road Yanjing to Markam, 50 km S Markam, 4400 m, alpine meadows, 24.–27. VI. 1997 leg. M. Trýzna, CSBC.

Paratypes: Same data as holotype, 19 ex. CSBC, 7 ex. SMNS. – SE Tibet, "Chola Shan" pass, road Yanjing to Markam, 50 km S Markam, 4400 m, alpine meadows, 24.–27. VI. 1997 leg. M. Trýzna & O. Šafránek, 6 ex. CSBC. – SE Tibet, "Chola Shan" pass, road Yanjing to Markam, 50 km S Markam, 4400 m, alpine meadows, 24.–27. VI. 1997 leg. J. Turna, 19 ex. CJTK, 5 ex. SMNS. – E Tibet, "Lao Shan" pass, road Markam to Zogang, 10 km W Markam, 4300 m, alpine meadow, 27.–28. VI. 1997 leg. M. Trýzna & O. Šafránek, 1 ex. CSBC. – SE Tibet, Chola Shan pass, road Yanjing to Markam, 50 km S Markam, 4200 m, 26.–29. VII. 1998 leg. M. Trýzna & O. Šafránek, 1 ex. CSBC. – Tibet, Nyingtri, SW Serkyim La, 3800–3900 m, 27.–28. VI. 1995 leg. W. Heinz, 4 ex. CJTK, 1 ex. SMNS. – W Sichuan, Ganzi Pref., Batang Co., Shalui Shan, 55 km NE Batang, 4300 m, 1.–3. VII. 1999 leg. D. Wrase, 1 ex. NKME. – W Sichuan, Ganzi Pref., Litang Co., Shalui Shan, 25 km NW Litang, 4300 m, 3. VII. 1999 leg. A Pütz, 1 ex. CAPE. – W Sichuan, S Dege, 3100–4300, 4.–9. VI. 1992 leg. L. & R. Businský, 1 ex. CJTK. – W Sichuan, SE Litang, 4100–4300 m, 22. VI. 1992 leg. L. & R. Businský, 1 ex. CJTK.

Etymology: Named after Ing. MILOŠ TRÝZNA (Krásná Lípa), collector of several *Laena* species from China.

Description: Body length 7.8–9.2 mm. Eyes (Fig. 180) not reduced, not prominent. Shape of pronotum see Fig. 180, disc scattered with small punctures, punctures on disc somewhat smaller than laterally, distance as 2–6 diameters, most punctures with longer setae, surface somewhat uneven and shagreened, lateral margin bordered, basal margin unbordered and indistinctly bent downwards, posterior angles rounded, propleures with more scattered and bigger punctures and same setation as on disc. Elytra (Fig. 180) with rows of punctures without striae, these rows partly extinguished in posterior part, punctures of rows sligthly smaller as punctures on pronotum, most punctures with a very short seta, intervals with an irregular scattered row of very small punctures bearing each a seta of same length, all intervals flat and shagreened, interval 9 with 3 indistinct setiferous pores. All femora in both sexes without teeth. Anterior and middle tibiae of males without distinct peculiarities, posterior tibiae of males dilated in the distal part and medially armed with spines (Figs 181–182). Aedeagus see Fig. 183.

Diagnosis: See under *Laena dickorei* n. sp. (chapter 2.17.) and *Laena gyamdaica* n. sp. (chapter 2.24.), both also from SE Tibet.

2.59. *Laena tuntalica* n. sp. (Figs 156–159)

Holotype (♂): E Tibet, Tuntala Shan, road Markam to Zogang, 40 km E Zogang, 4500 m, *Picea* forest, 29. VI.–3. VII. 1997 leg. M. TRÝZNA & O. ŠAFRÁNEK, CSBC.

Paratypes: Same data as holotype, 21 ex. CSBC, 7 ex. SMNS. – E Tibet, Tuntala Shan, road Markam to Zogang, 20 km NE Zogang, 5000 m, alpine meadow, 30. VI.–2. VII. 1997 leg. M. TRÝZNA & O. ŠAFRÁNEK, 4 ex. CSBC. – E Tibet, SE Zogang, Wangda, 3800–4400 m, 14. VII. 1996, leg. L. & R. BUSINSKÝ, 5 ex. CJTK. – E Tibet, Bamda, 4400 m, grassland, 5. VII. 1997 leg. M. TRÝZNA & O. ŠAFRÁNEK, 2 ex. CSBC. – E Tibet, Lhodzong, Poshö, 12.600 ft., 15. V. 1936 leg. R. J. H. KAULBACK, 1 ex. HNHM. – China, SW Sichuan, Sumdo, 2000–2500 m, *Picea* forest, 8. VII. 1994 leg. J. KALÁB, 5 ex. CJTK, 2 ex. SMNS. – China, W Sichuan, Ganzi Pref., Litang Co., Shalui Shan, 25 km NW Litang, 4200 m, 1.–3. VII. 1999 leg. D. WRASE, 2 ex. NKME.

Etymology: Named after the mountain range Tuntala Shan, where most of the types have been collected.

Description: Body length 4.8–6.0 mm. Eyes (Fig. 156) not reduced, not prominent. Shape of pronotum see Fig. 156, disc scattered with small punctures, distance as 2–6 diameters, lateral punctures with long setae, surface flat and shagreened, lateral margin bordered, basal margin unbordered and not bent downwards, posterior angles rounded, propleures with more scattered and bigger punctures and same setation as on disc. Elytra (Fig. 156) with rows of punctures without striae, punctures of rows as big as punctures on pronotum, most punctures with a short seta, intervals with an irregular scattered row of very small punctures bearing each a seta of same length, all intervals flat and shining, interval 9 with 3 indistinct setiferous pores. All femora in both sexes without teeth. All tibiae of males somewhat sinuated medially (Figs 157–158). Aedeagus see Fig. 159.

Diagnosis: *Laena tuntalica* n. sp. belongs to the group around *alticola* and *parallelocollis,* but can be separated by the different shape of the aedeagus with broad joint parameres (more or less triangular in *alticola* and *parallelocollis*) and by the sexual dimorph tibiae (without sexual dimorphism in *alticola* and *parallelocollis*). The

punctation of the pronotum and of the elytral intervals is as fine as in *parallelocollis* (both rougher in *alticola*).

2.60. *Laena turnai* **n. sp.** (Figs 57–60)

Holotype (♂): China, S Sichuan, 30 km NW Muli (Bowa), 3500 m, 2. VII. 1998 leg. M. Bocák, SMNS.

Paratypes: Same data as holotype, 8 ex. SMNS, 1 ex. BMNH. – China, S Sichuan, 20 km S Muli (Bowa), 3500 m, 29. VI. 1998 leg. M. Bocák, 2 ex. SMNS. – China, S Sichuan, 15 km SW Pingchuan, 3200 m, 26. VI. 1998 leg. M. Bocák, 1 ex. SMNS. – China, S Sichuan, 30 km NW Muli (Bowa), 3500 m, mixed forest, 24. VII. 1995 leg. J. Turna, 8 ex. CJTK. – China, Sichuan, 30 km NW Muli (Bowa), 3500 m, mixed forest, 1.–2. VII. 1998 leg. J. Turna, 19 ex. CJTK, 5 ex. SMNS. – China, S Sichuan, 40 km NW Muli, 3600–3900 m, VIII. 1995 leg. L. P. Cavzzuti, 3 ex. CJTK.

Etymology: Named after Jaroslav Turna (Kostelec Na Hane), collector of several paratypes and other *Laena* species from China.

Description: Body length 9.3–11.0 mm. Eyes (Fig. 57) not reduced, not prominent. Shape of pronotum see Fig. 57, disc with dense and big punctures, distance as 1–3 diameters, lateral punctures with very short setae, surface uneven and somewhat shining, base with a distinct transverse impression, lateral margin unbordered, basal margin unbordered and not bent downwards, posterior angles rounded, propleures with distinctly wider punctation as on disc and without setation. Elytra (Fig. 57) with rows of punctures in indistinct striae, punctures of rows in the basal part of the elytra as big as punctures on pronotal disc, punctures of rows extinguished in the posterior third of the elytra, all punctures without seta, intervals in basal part with scattered small punctures bearing sometimes very short setae, all intervals distinctly shagreened, medial intervals flat, lateral intervals convex (particularly interval 7), interval 9 with 4 setiferous pores. All femora in both sexes with distinct teeth. Anterior and middle tibiae of males without distinct sexual dimorphism, posterior tibia of males with broadly hooked apex and medially with granules (Figs 58–59). Aedeagus see Fig. 60.

Diagnosis: *Laena turnai* n. sp. shares with *xuerensis* from Yunnan the big body size and shape as well as the extinguished elytral rows in the posterior third of the elytra, but can be separated, apart from the different aedeagus, by a broader pronotum with a distinct transverse basal impression, by distinctly armed femora and by differently modified posterior tibiae in males, and by the punctured elytral intervals.

2.61. *Laena watanabei* Masumoto & Yin 1993 (Figs 239–242)

Type locality: Yunnan, Xi Shan SW Kunming, 2130 m.

Studied type material: Yunnan, Kunming, Yuan Shan, 2130 m, 6. XI. 1992 leg. S. Uéno, holotype NSMT. – Yunnan, Kunming, Yuan Shan, 2130 m, 5. XI. 1982 leg. S. Uéno, 1 paratype HNHM.

New material: Yunnan, Xi Shan, 2300 m, 27. VI. 1993 leg. V. Kubáň, 1 ex. CSBC, 1 ex. CJTK. – Yunnan, Xi Shan, 25 km S Kunming, 29.–30. VII. 1995, 3 ex. CSBC, 1 ex. SMNS. – Yunnan, Western Hills, 1800 m, 24. VII. 1996 leg. A. Smetana, J. Farkač & P. Kabátek, 3 ex. NHMB, 1 ex. SMNS.

Redescription: Body length 5.0–6.3 mm. Eyes (Fig. 239) not reduced, not prominent. Shape of pronotum see Fig. 239, disc regularly and dense with big punctures, distance as 1–2 diameters, all punctures with long and erect setae, surface flat and shining, lateral margin bordered, basal margin unbordered and not bent down-

wards, posterior angles rounded, propleures with same punctation and setation as on disc. Elytra (Fig. 239) with rows of punctures without striae, punctures of rows as big as punctures on pronotum, each puncture with a long and erect seta, intervals with a regular row of smaller punctures bearing each a seta of same length, all intervals flat and shining, interval 7 with a humeral setiferous pore, interval 9 with 5 setiferous pores. All femora in both sexes without teeth. All tibiae without sexual dimorphism (Figs 240–241). Aedeagus see Fig. 242.

2.62. *Laena wolongica* **n. sp.** (Figs 81–84)

Holotype (♂): China, Sichuan, Wolong Nature Reserve, 1700 m, 18.–20. V. 1994 leg. S. Kurbatov, HNHM.

Paratype: Same data as holotype, 1 ♀ SMNS.

Etymology: Named after the Wolong Nature Reserve (with the Giant Panda), where the types have been collected.

Description: Body length 4.0–4.2 mm. Eyes (Fig. 81) not reduced, not prominent. Shape of pronotum see Fig. 81, disc regularly with big punctures, distance as 0.5–2 diameters, all punctures with long setae, surface shining, lateral margin unbordered, basal margin unbordered and not bent downwards, posterior angles rounded, propleures with sparser punctation and shorter setation as on disc. Elytra (Fig. 81) with rows of punctures without striae, punctures of rows as big as punctures on pronotum, most punctures with a seta, intervals with very few and very small punctures bearing a short seta, all intervals slightly convex and shining, interval 9 with 3 setiferous pores. All femora in both sexes with distinct teeth. Tibiae without distinct modifications, posterior tibiae of males with finely hooked inner apex (Figs 82–83). Aedeagus see Fig. 84.

Diagnosis: *Laena wolongica* n. sp. is similar in body size and shape as *emeishana* also from Sichuan, but can be separated by the armed femora, by the shape of the pronotum with narrow base, by the complete elytral rows of punctures and by the shape of the aedeagus. *Laena daliensis* and *Laena diancangica* n. sp., both from Yunnan, might belong to the same group, but, apart from a different aedeagus, *daliensis* has unarmed femora and the pronotum with a different shape and with a lateral border, and *diancangica* n. sp. has also unarmed femora and the pronotum with a different shape.

2.63. *Laena wrasei* **n. sp.** (Figs 259–262)

Holotype (♂): China, W Sichuan, Ganzi Pref., Luding Co., W Erlang Shan Pass, 7 km SSE Luding, 2600 m, 20.–29. VI. 1999 leg. D. Wrase, NKME.

Paratypes: Same data as holotype, 3 ex. NKME, 2 ex. SMNS.

Etymology: Named after David Wrase (Berlin), collector of the holotype and other species of *Laena* from China.

Description: Body length 3.5–4.3 mm. Eyes (Fig. 259) not reduced, not prominent. Shape of pronotum see Fig. 259, disc with dense and big punctures, punctures confluent or distance below 1 diameter, all punctures with longer setae, surface uneven and shagreened, disc with a distinct longitudinal impression (in a few specimens indistinct) and an additional pair of small impressions, lateral margin unbordered, basal margin unbordered and not bent downwards, posterior angles rounded, propleures with same punctation and setation as on disc. Elytra (Fig. 259) with rows of

punctures without striae, punctures of rows as big as punctures on pronotum, each puncture with a short seta, intervals with scattered small punctures bearing each a setae of same length, all intervals slightly convex and shagreened, interval 9 with 3 setiferous pores. All femora in both sexes without teeth. Posterior tibiae of males with finely hooked inner apex (Figs 260–261). Aedeagus see Fig. 262.

Diagnosis: *Laena wrasei* n. sp. seems to be related to *daliensis* from Yunnan, both share the small body size and shape, the unarmed femora and possess a similar aedeagus. *Laena wrasei* n. sp. can be separated by a different shape of the pronotum without lateral border, by a rougher confluent punctation on the pronotum, by shorter setation on the elytra and by a scattered punctation (not in a single row) on the elytral intervals. See also under *daxueica* n. sp. (chapter 2.14.).

2.64. *Laena xuerensis* Masumoto 1996 (Figs 204–207)

Type locality: Yunnan, Diancang Shan W Dali, 3120 m.

Studied type material: Yunnan, Diancang Shan, Xueren Feng, Dali, 3120 m, leg. S. Uéno, holotype NSMT.

New material: Yunnan, Heishui 35 km N Lijiang, 18. VI.–4. VII. 1993 leg. S. Bečvář, 2 ex. CSBC. – Yunnan, Heishui 35 km N Lijiang, 1.–19. VII. 1992 leg. S. Bečvář, 1 ex. CSBC. – Yunnan, Heishui 35 km N Lijiang, 1.–19. VII. 1992 leg. E. Jendek, 1 ex. NHMW. – Yunnan, Yulong Shan, 3900 m, 16.–19. VI. 1993 leg. Bolm, 1 ex. CSBC. – Yunnan, Yulong Shan, Baishui, 2900–3500 m, 7.–12. VII. 1990 leg. D. Král, 1 ex. SMNS. – Yunnan, 50 km N Lijiang, Yulong Shan NR, 24.–29. VI. 1993 leg. E. Jendek & O. Sausa, 2 ex. NHMW, 2 ex. SMNS. – Yunnan, Hengduan Shan, Yunling, 3300 m, 17.–19. VII. 1996 leg. V. Kubáň, 1 ex. CSBC.

Redescription: Body length 9.0–10.3 mm. Eyes (Fig. 204) not reduced, not prominent. Shape of pronotum see Fig. 204, disc scattered with big punctures, punctures on disc somewhat smaller, distance as 1–4 diameters, all punctures with short setae, surface uneven and somewhat shining, base with a small medial impression, lateral margin indistinctly bordered, basal margin unbordered and not bent downwards, posterior angles rounded, propleures with distinctly wider punctation as on disc and without setation. Elytra (Fig. 204) with rows of punctures without striae, punctures of rows in the basal part of the elytra as big as punctures on pronotal disc, punctures of rows extinguished in the posterior third of the elytra, all punctures without seta, intervals mostly without punctures and without setation, only in the basal part with a row of very fine punctures without or with very short setae, all intervals distinctly shagreened, medial intervals flat, lateral intervals convex (in holotype particularly interval 7), interval 9 with 4 setiferous pores. All femora in both sexes without teeth. All tibiae of males with finely hooked inner apex, anterior and posterior tibia of males somewhat swollen medially (Figs 205–206). Aedeagus see Fig. 207.

2.65. *Laena yajiangica* **n. sp.** (Figs 33–36)

Holotype (♂): China, W Sichuan, Ganzi Pref., Yajiang Co., Shalui Shan, 20 km W Yajiang, 4250 m, 2. VII. 1999 leg. D. Wrase, NKME.

Paratype: Same data as holotype, 1 ex. SMNS.

Etymology: Named after the village Yajiang, in whose vicinity the types have been collected.

Description: Body length 4.7–5.2 mm. Eyes (Fig. 33) not reduced, not prominent. Shape of pronotum see Fig. 33, disc scattered with big punctures, distance as

0.5–1 diameter, most punctures with short setae, surface uneven and shagreened, disc with a feeble longitudinal impression and with an additional pair of distinct impressions, lateral margin distinctly marked and crenulated but not bordered, basal margin unbordered and not bent downwards, propleures with wider punctation and shorter setation as on disc. Elytra (Fig. 33) with rows of punctures without striae, punctures of rows as big as punctures on pronotum, most punctures with short setae, intervals with scattered fine microgranules bearing a very short seta, all inner intervals flat but uneven and shining, interval 7 keel-like, intervals 8–9 vertical and nearly not to be seen from dorsal, intervals without distinct 3 setiferous pores. All femora in both sexes without teeth. All tibiae of males nearly unmodified (Figs 34–35). Aedeagus see Fig. 36.

Diagnosis: *Laena bowaica* n. sp., *yajiangica* n. sp., *schuelkei* n. sp. and *yulongica* n. sp. form a quite unique group within the genus to be recognized by the opaque dorsal side with rough punctation, and particularly by the flat elytra between the keel-like interval 7, this interval 7 forming a pseudolateral margin with the vertical intervals 8 and 9 as pseudopleures. *Laena schuelkei* n. sp. and *yulongica* n. sp. possess a similar aedeagus with stout parameres, but the shape of the pronotum and the structure of the elytra are quite different. *Laena bowaica* n. sp. and *yajiangica* n. sp. share the longer parameres of the aedeagus, but *yajiangica* n. sp. is smaller and has a crenulated lateral margin of the pronotum of different shape. *Laena mirabilis* (unknown to me) might belong to the same group, but is bigger and has a different structure of the pronotum and elytra.

2.66. *Laena yasuakii* Masumoto 1996 (Figs 73–76)

Type locality: Yunnan, Jizu Shan, 2260 m.

Studied type material: Yunnan, Jizu Shan, Binchuan Xian, 2260 m, 25. X. 1995 leg. Y. Watanabe & N. Xiao, holotype NSMT.

New material: Not seen.

Redescription: Body length 5.8 mm. Eyes (Fig. 73) not reduced, not prominent. Shape of pronotum see Fig. 73, disc with dense and big punctures, distance as 1–2 diameters, most punctures with long setae, surface flat and shining, lateral margin unbordered but somewhat crenulated, basal margin unbordered and not bent downwards, posterior angles rounded, propleures with wider punctation and same setation as on disc. Elytra (Fig. 73) with rows of punctures without striae, punctures of rows as big as punctures on pronotum, each puncture with a long seta, intervals with a fine row of scattered smaller punctures bearing each a seta of same length, all intervals slightly convex and shining, interval 9 with 3 setiferous pores. Anterior femora of males (females unknown) with a distinct angle distally, the other femora unarmed. Anterior tibiae of males without pecularities, posterior tibiae of males with a finely hooked inner apex (Figs 74–75). Aedeagus see Fig. 76.

2.67. *Laena yufengsi* Masumoto 1996 (Figs 125–128)

Type locality: Yunnan, Yufengsi near Yulongxue Shan, 2640 m.

Studied type material: Yunnan, Yufeng Si near Yulongxue Shan, 2640 m, 21. X. 1995 leg. Y. Watanabe & N. Xiao, holotype NSMT.

New material: Yunnan, Heishui 35 km N Lijiang, 18. VI.–4. VII. 1993 leg. S. Bečvář, 3 ex. CSBC, 2 ex. SMNS. – Yunnan, Heishui 35 km N Lijiang, 1.–9. VII. 1992 leg. S. Bečvář, 3 ex. CSBC. – Yunnan, Heishui 35 km N Lijiang, 1.–19. VII. 1992 leg. E. Jendek, 1 ex. NHMW,

1 ex. CJTK. – Yunnan, 50 km N Lijiang, Yulong Shan NR, 24.–29. VI. 1993 leg. E. Jendek & O. Sausa, 3 ex. CSBC, 2 ex. CJTK, 2 ex. NHMW, 1 ex. SMNS. – Yunnan, Yulong Shan, 3200 m, 23.–24. VI. 1993 leg. Bolm, 1 ex. CSBC. – Yunnan, Yulong Shan, 3900 m, 16.–19. VI. 1993 leg. Bolm, 2 ex. CJTK. – Yunnan, Yulong Shan, 2900–3500 m, 24.–26. V. 1993 leg. V. Kubáň, 2 ex. CSBC, 1 ex. CJTK. – Yunnan, Yulong Shan, 3500–4000 m, 16.–19. VI. 1993 leg. V. Kubáň, 1 ex. CJTK. – Yunnan, Yulong Shan, 3600–4100 m, 27. V. 1993 leg. V. Kubáň, 1 ex. SMNS. – Yunnan, Yulong Shan, Ganhaizi, 3400 m, 20.–23. VII. 1996 leg. V. Kubáň, 1 ex. NHMB. – Yunnan, Hengduan Shan, Yunling, 3300 m, 17.–19. VII. 1996 leg. V. Kubáň, 5 ex. CSBC, 5 ex. CJTK, 3 ex. SMNS.

Redescription: Body length 6.0–8.8 mm. Eyes (Fig. 125) not reduced, not prominent. Shape of pronotum see Fig. 125, disc with dense and big punctures, distance below 1 diameter or even punctures touching each other, all punctures with short setae, surface uneven and somewhat shining, base with a small unpunctured medial impression, lateral margin unbordered or partly indistinctly bordered, basal margin unbordered and not bent downwards, posterior angles rounded, propleures with wider punctation and shorter setation as on disc. Elytra (Fig. 125) with rows of punctures in feeble striae, punctures of rows as big as punctures on pronotum, each puncture with a very short seta, intervals with a row of smaller punctures bearing each a somewhat longer seta, all intervals distinctly wrinkled by these punctures, all intervals convex and shining, interval 9 with 3 setiferous pores. All femora in both sexes with an indistinct angle distally. All tibiae of males with finely hooked inner apex, posterior tibiae of males without distinct modifications (Figs 126–127). Aedeagus see Fig. 128.

2.68. *Laena yulongica* **n. sp.** (Figs 25–28)

Holotype (♂): China, Yunnan, Heishui 35 km N Lijiang, 18. VI.–4. VII. 1993 leg. S. Bečvář, CSBC.

Paratypes: Same data as holotype, 4 ex CSBC, 7 ex. SMNS. – China, Yunnan, Heishui 35 km N Lijiang, 1.–19. VII. 1992 leg. S. Bečvář, 8 ex. CSBC. – China, Yunnan, Heishui 35 km N Lijiang, 1.–19. VII. 1992 leg. E. Jendek, 2 ex. NHMW, 1 ex. CJTK. – China, Yunnan, Yulong Shan, 3500–4000 m, 16.–19. VI. 1993 leg. V. Kubáň, 3 ex. CSBC, 3 ex. CJTK, 2 ex. SMNS. – China, Yunnan, Yulong Shan, 3200–3900 m, 27. V.–24. VI. 1993 leg. Bolm, 6 ex. CSBC. – Yunnan, Yulong Shan, 3900 m, 16.–19. VI. 1993 leg. Bolm, 2 ex. CJTK. – China, Yunnan, 50 km N Lijiang, Yulong Shan NR, 24.–29. VI. 1993 leg. E. Jendek & O. Sausa, 4 ex. CSBC, 2 ex. CJTK, 1 ex. NHMW. – China, Yunnan, Heishui, 24.–28. V. 1993 leg. R. Cervenka, 1 ex. CSBC. – China, Yunnan, 30 km N Lijiang, 3000 m, 3. VII. 1990 leg. L. & M. Bocák, 1 ex. NHMB.

Etymology: Named after the mountain range Yulong Shan N Lijiang, where the types have been collected.

Description: Body length 6.0–7.1 mm. Eyes (Fig. 25) not reduced, not prominent. Shape of pronotum see Fig. 25, disc scattered with big punctures, punctures laterally somewhat denser and bigger than medially, distance as 0.5–2 diameters, most punctures with short setae, surface uneven and shagreened, disc with a pair of distinct impressions and base with a broad transverse impression, lateral margin distinctly marked but not bordered, basal margin unbordered and bent downwards by the basal impression, propleures with wider punctation and shorter setation as on disc. Elytra (Fig. 25) with rows of punctures without striae, punctures of rows as big as punctures on pronotum, most punctures without distinct seta, intervals with scattered fine punctation, punctures bearing a very short seta, all inner intervals flat but uneven and shining, interval 7 keel-like, intervals 8–9 vertical and nearly not to be

seen from dorsal, interval 9 with 3 setiferous pores. All femora in both sexes without teeth. All tibiae of males nearly unmodified (Figs 26–27). Aedeagus see Fig. 28.

Diagnosis: See under *Laena yajiangica* n. sp. (chapter 2.65.).

2.69. *Laena yuzhuensis* Masumoto & Yin 1994 (Figs 247–250)

Type locality: Yunnan, Diancang Shan W Dali, 3500 m.

Studied type material: Yunnan, Diancang Shan, Yuzhu Feng, Dali Shi, 3500 m, 5. IX. 1993 leg. Y. Watanabe, holotype NSMT.

New material: Not seen.

Redescription: Body length 5.5–5.7 mm. Eyes (Fig. 247) not reduced, not prominent. Shape of pronotum see Fig. 247, disc with dense and big punctures, distance as 0.5–2 diameters, most punctures with long setae, surface flat and shagreened, basal part with weak longitudinal impression, lateral margin bordered, basal margin unbordered and not bent downwards, posterior angles rounded, propleures with wider punctation as on disc and mostly without setation. Elytra (Fig. 247) with rows of punctures without striae, punctures of rows as big as punctures on pronotum, most punctures with a short seta, intervals with a fine row of scattered smaller punctures bearing mostly a short seta, all intervals slightly convex and shining, interval 9 with 3 setiferous pores. All femora of males (female unknown) without teeth. All tibiae without distinct sexual dimorphism (Figs 248–249). Aedeagus see Fig. 250.

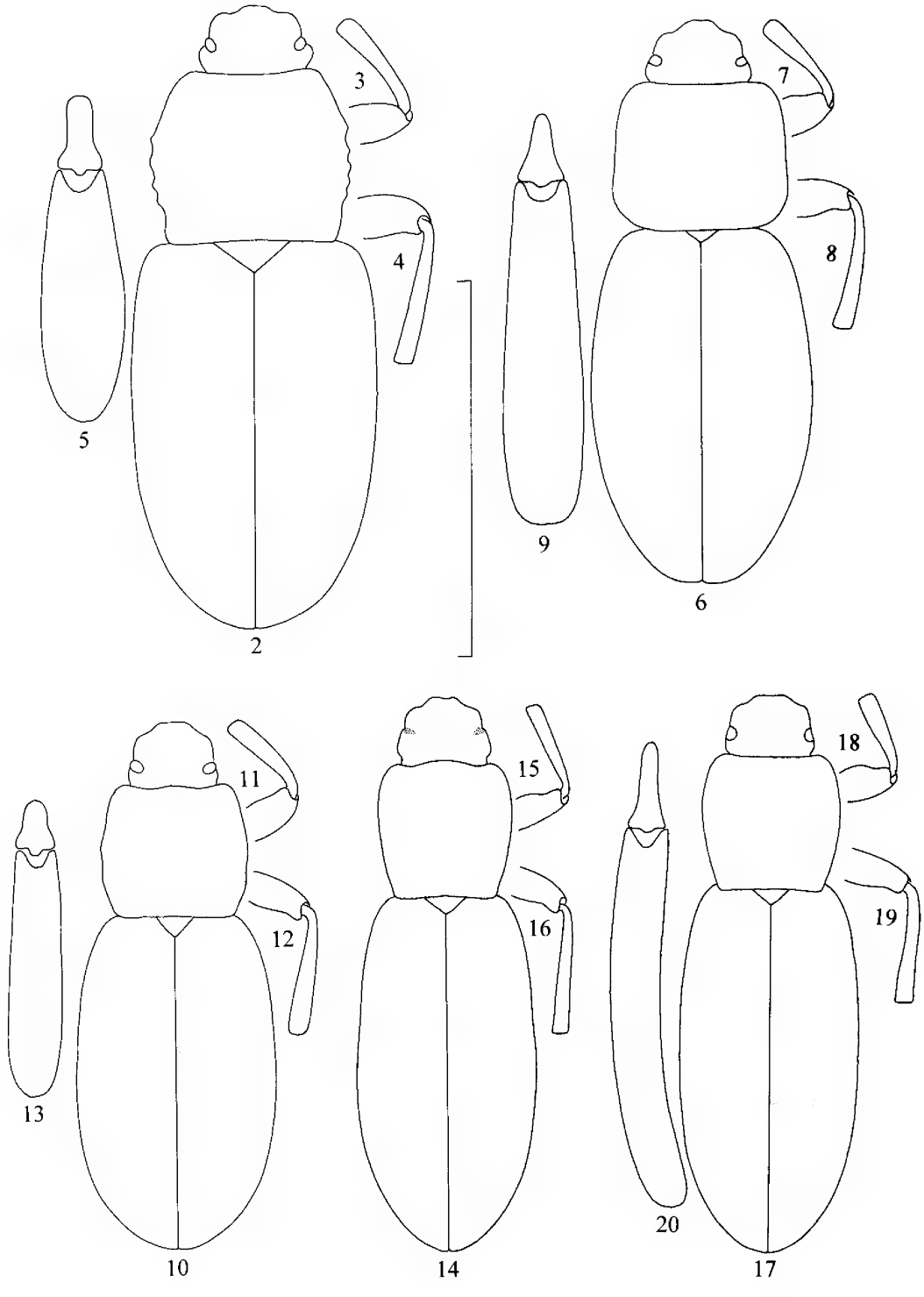
2.70. *Laena zogqenica* **n. sp.** (Figs 152–155)

Holotype (♂): China, NW Sichuan, road Zogqen to Qagca, 60 km NW Zogqen, 4000 m, 19. VI. 1995 leg. J. Rejsek, CSBC.

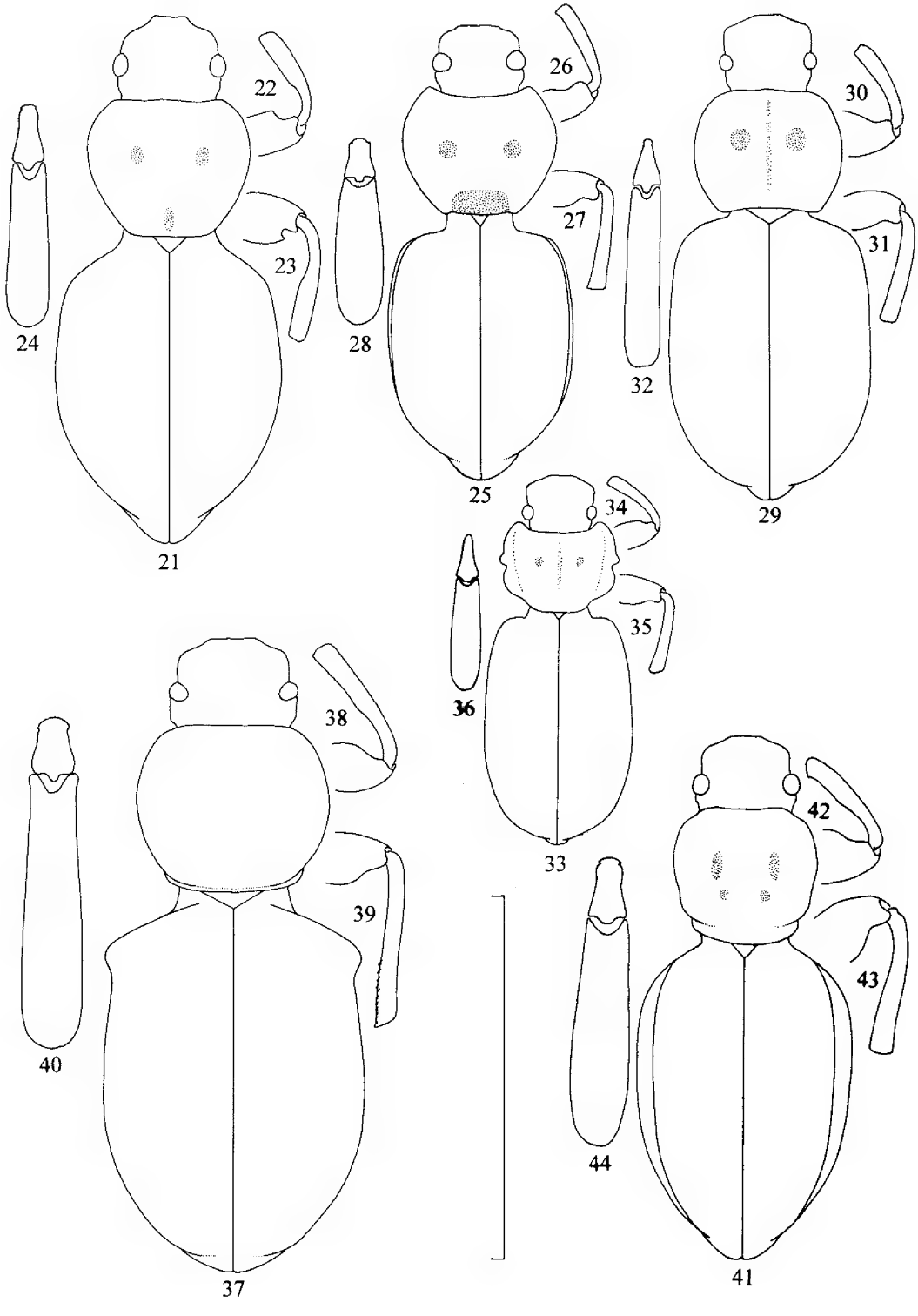
Etymology: Named after the village Zogqen, in whose vicinity the holotype has been collected.

Description: Body length 4.6 mm. Eyes (Fig. 152) not reduced, not prominent. Shape of pronotum see Fig. 152, disc scattered with small punctures, distance as 3–5 diameters, most punctures with longer setae, surface flat and shagreened, lateral margin bordered, basal margin unbordered and not bent downwards, posterior angles somewhat marked, propleures with similar punctures and shorter setation as on disc. Elytra (Fig. 152) with rows of punctures without striae, punctures of rows somewhat bigger than punctures on pronotum, punctures of rows feebly extinguished in the posterior third of the elytra, most punctures with a very short seta, intervals with an irregular row of small punctures bearing each a seta of same length, all intervals flat and shining, interval 9 with 3 indistinct setiferous pores. All femora in males (females unknown) without teeth. All tibiae in males without distinct modifications, posterior tibiae of males with finely hooked inner apex (Figs 153–154). Aedeagus see Fig. 155.

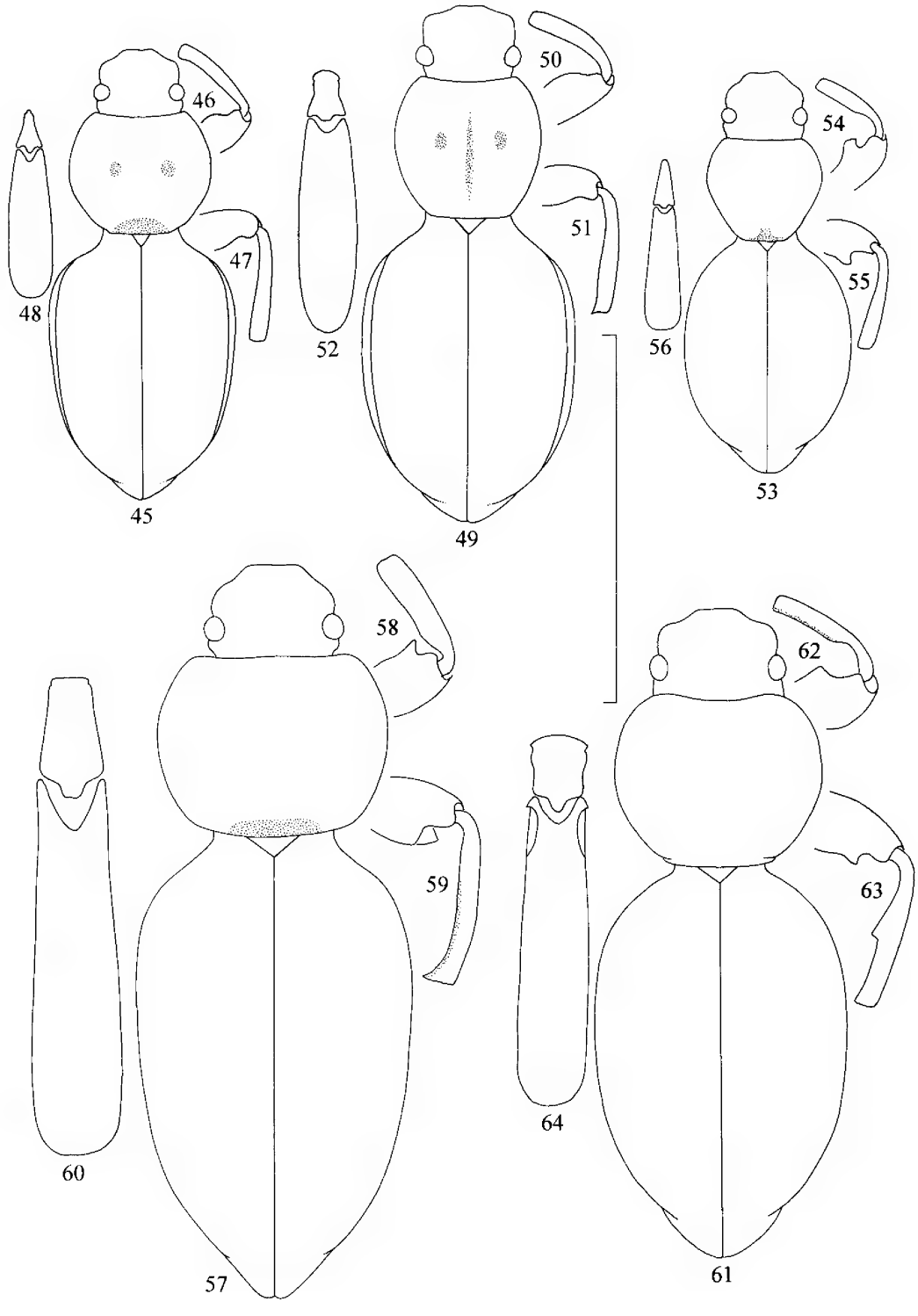
Diagnosis: *Laena zogqenica* n. sp. shares with *alticola* and *parallelocollis* from southern Tibet the existence of a bordered lateral pronotal margin, the structure of the elytra, the unarmed femora, the unmodified tibiae and has a similar aedeagus. It can be separated mainly by the shape of the cordiform pronotum with an extremely narrow base. See also under *alticola* (chapter 2.1.).



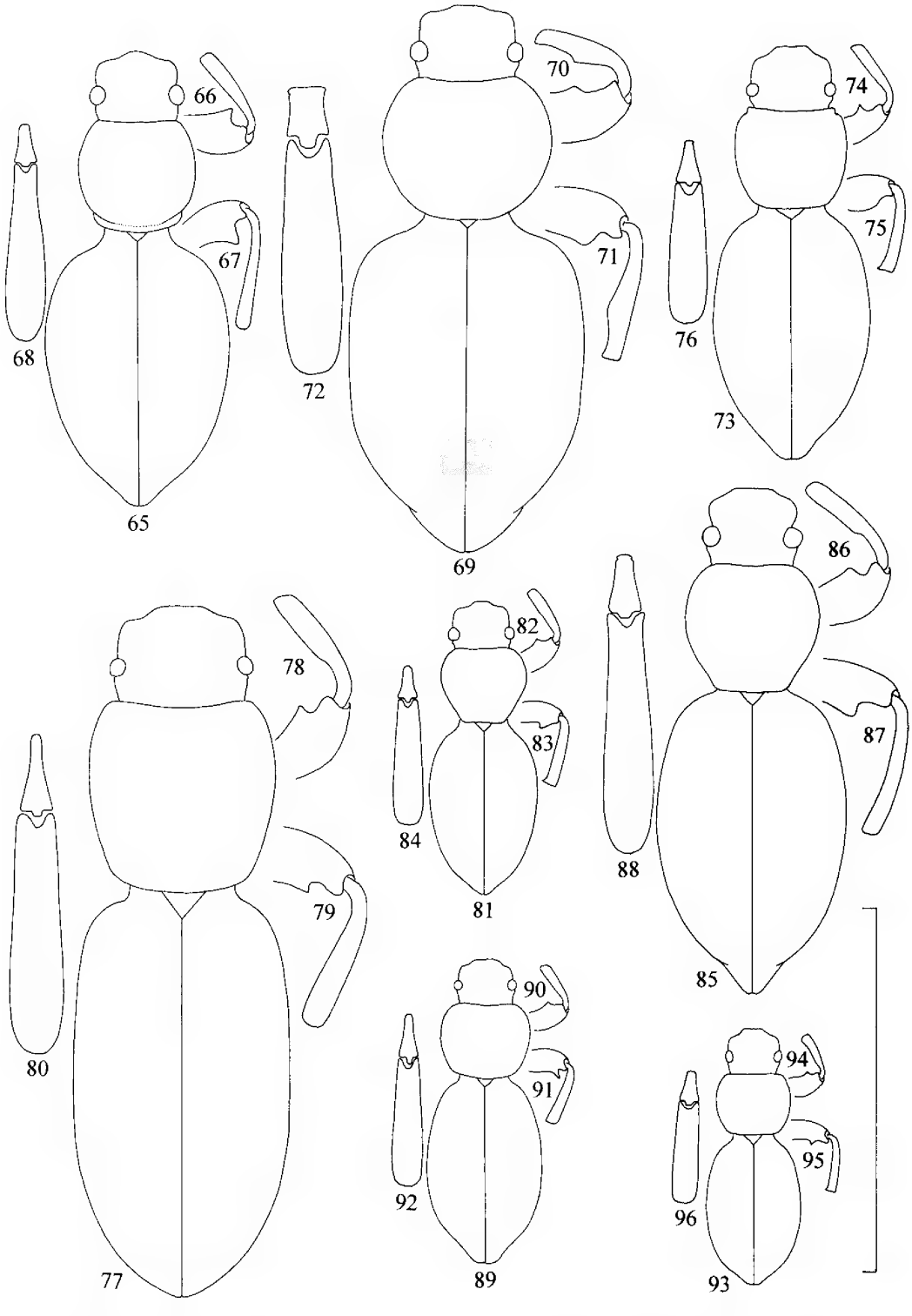
Figs 2–20. Male body shape, anterior tibia, posterior tibia and aedeagus of *Laena* species. – 2–5. *L. nomurai* n. sp., holotype; – 6–9. *L. hualongica* n. sp., holotype; – 10–13. *L. hongyuanica* n. sp., holotype; – 14–16. *L. nanpingica* n. sp., female holotype; – 17–20. *L. benesi* n. sp., holotype. – Scale: 5.0 mm (body, legs), 2.5 mm (aedeagus).



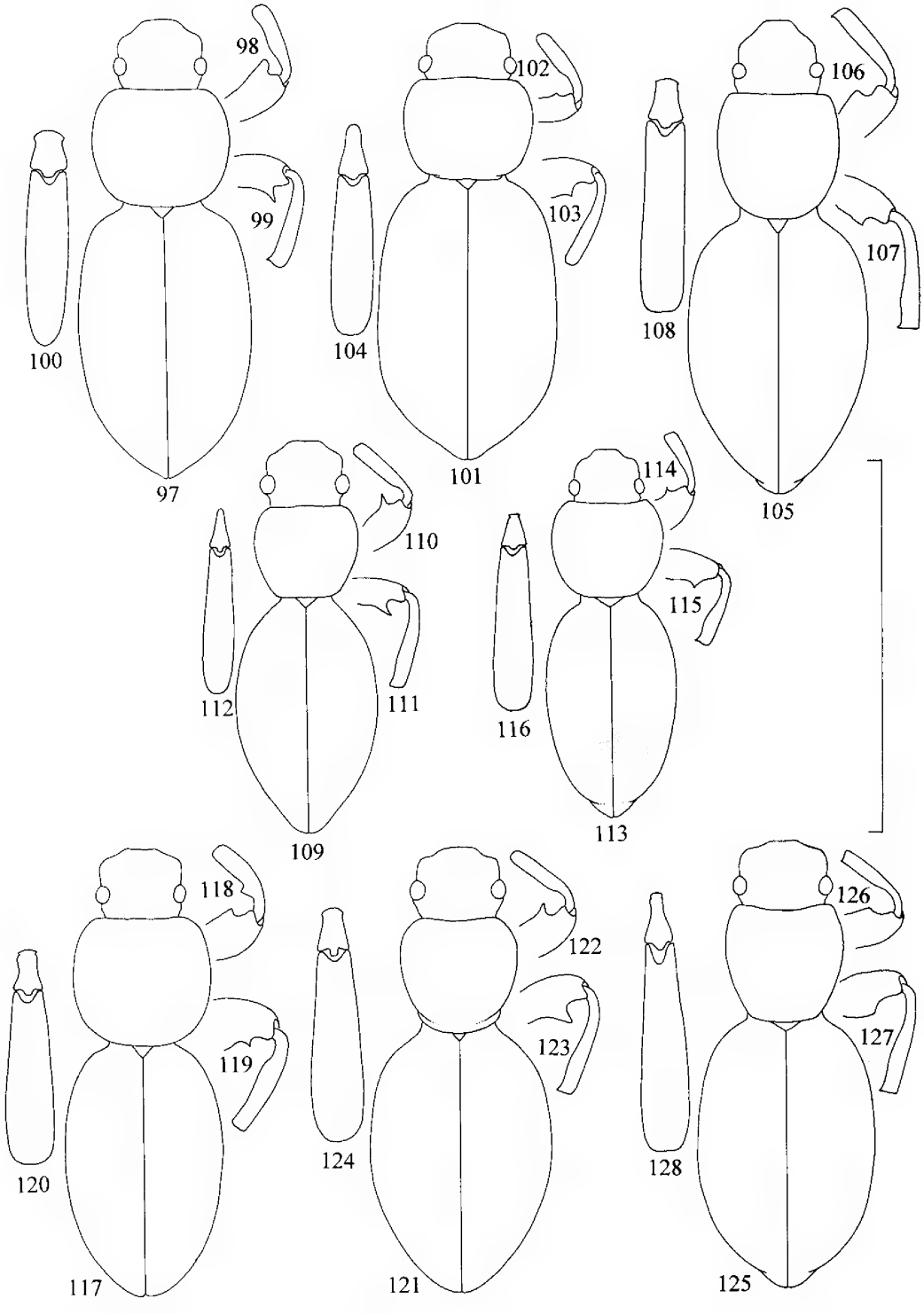
Figs 21–44. Male body shape, anterior tibia, posterior tibia and aedeagus of *Laena* species. – 21–24. *L. kubani* n. sp., holotype; – 25–28. *L. yulongica* n. sp., holotype; – 29–32. *L. bowaica* n. sp.; – 33–36. *L. yajiangica* n. sp., holotype; – 37–40. *L. mulica* n. sp., holotype; – 41–44. *L. haigouica* n. sp., holotype. – Scale: 5.0 mm (body, legs), 2.5 mm (aedeagus).



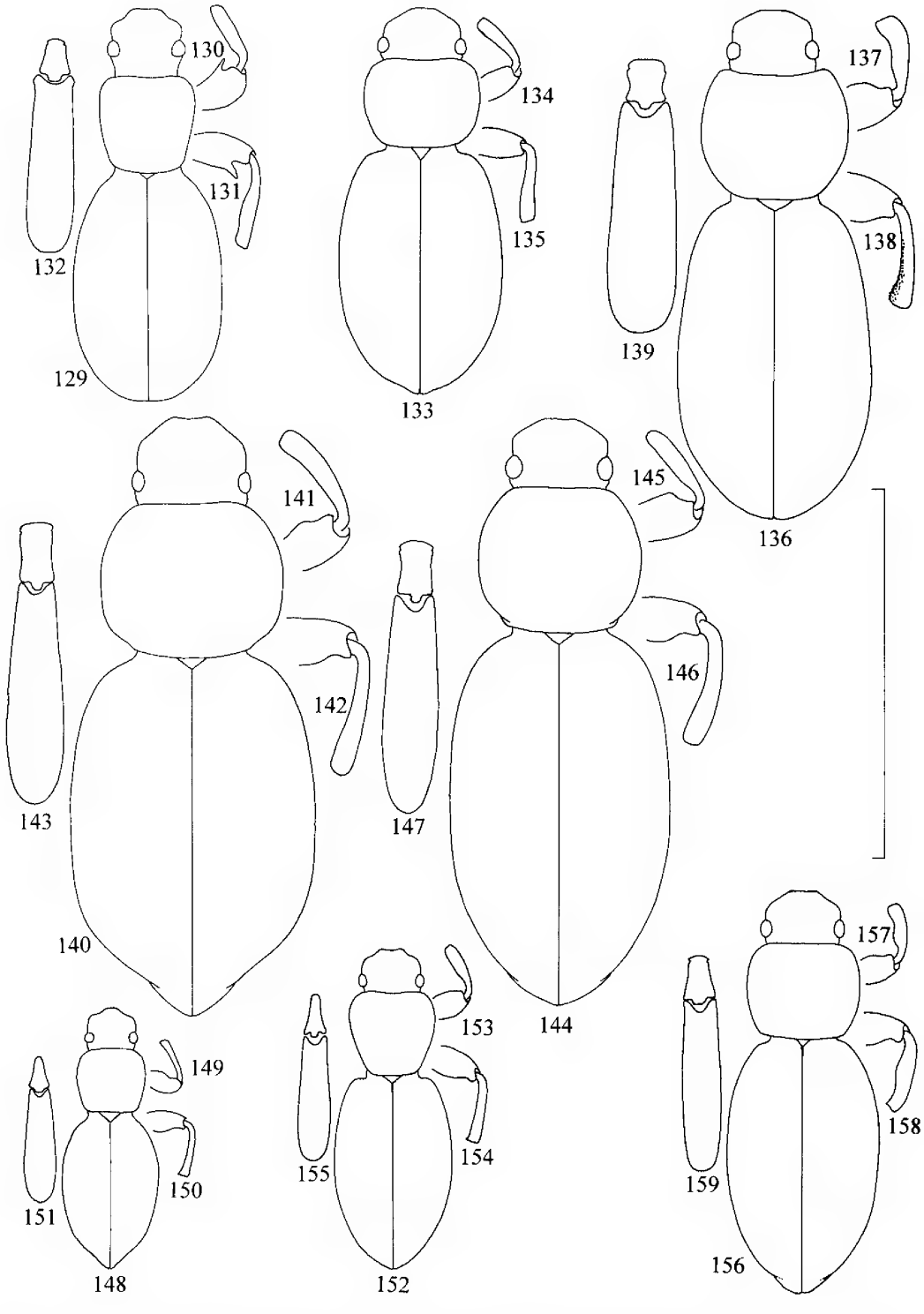
Figs 45–64. Male body shape, anterior tibia, posterior tibia and aedeagus of *Laena* species. – 45–48. *L. habashanica* n. sp., holotype; – 49–52. *L. schuelkei* n. sp., holotype; – 53–56. *L. chinensis,* non-type male; – 57–60. *L. turnai* n. sp., holotype; – 61–64. *L. tabanai,* holotype. – Scale: 5.0 mm (body, legs), 2.5 mm (aedeagus).



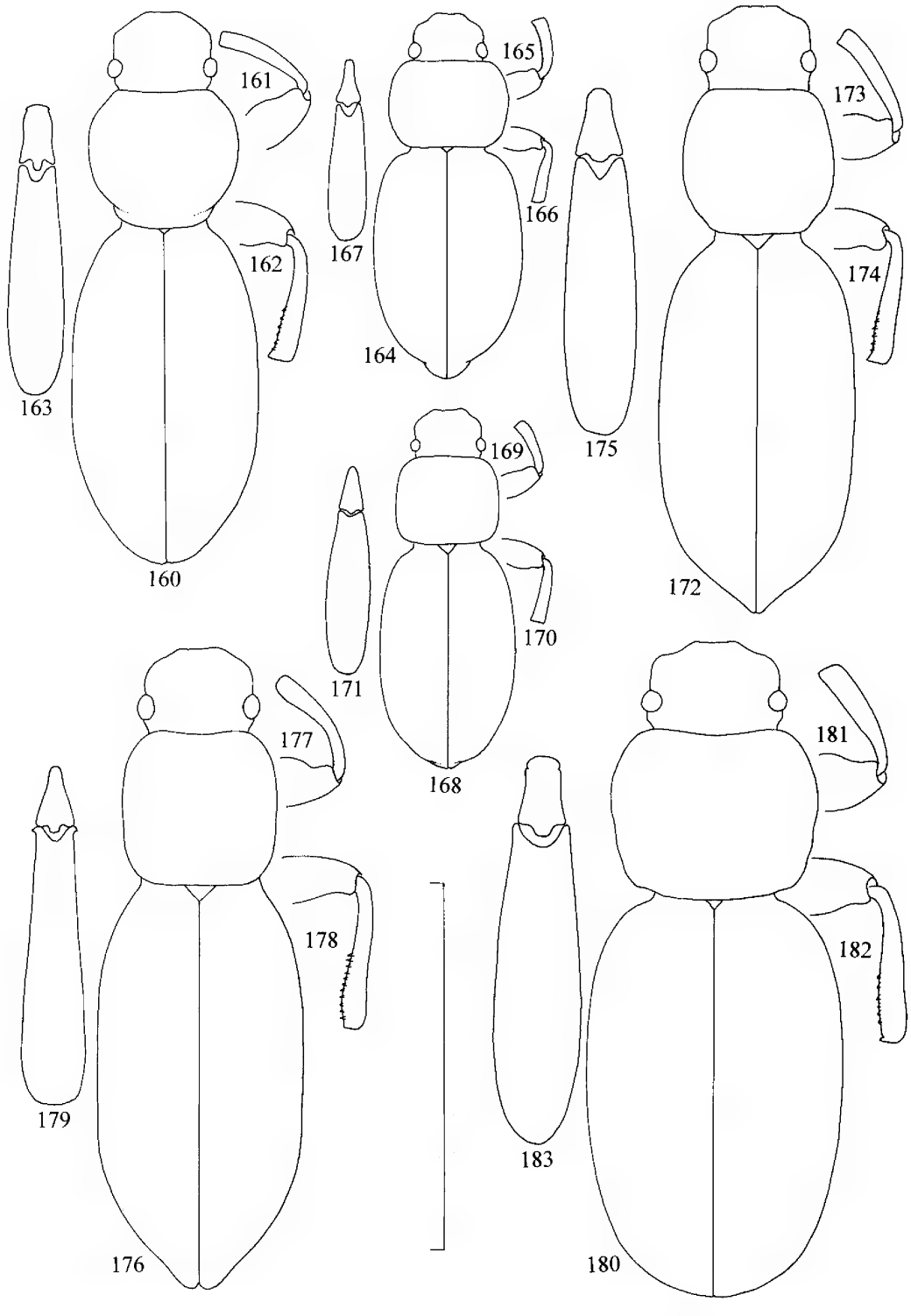
Figs 65–96. Male body shape, anterior tibia, posterior tibia and aedeagus of *Laena* species. – 65–68. *L. smetanai* n. sp., holotype; – 69–72. *L. hubeica* n. sp., holotype; – 73.–76. *L. yasuakii,* holotype; – 77–80. *L. shaluica* n. sp., holotype; – 81–84. *L. wolongica* n. sp., holotype; – 85–88. *L. angulifemoralis,* holotype; – 89–92. *L. gracilis,* holotype; – 93–96. *L. daxueica* n. sp.; holotype. – Scale: 5.0 mm (body, legs), 2.5 mm (aedeagus).



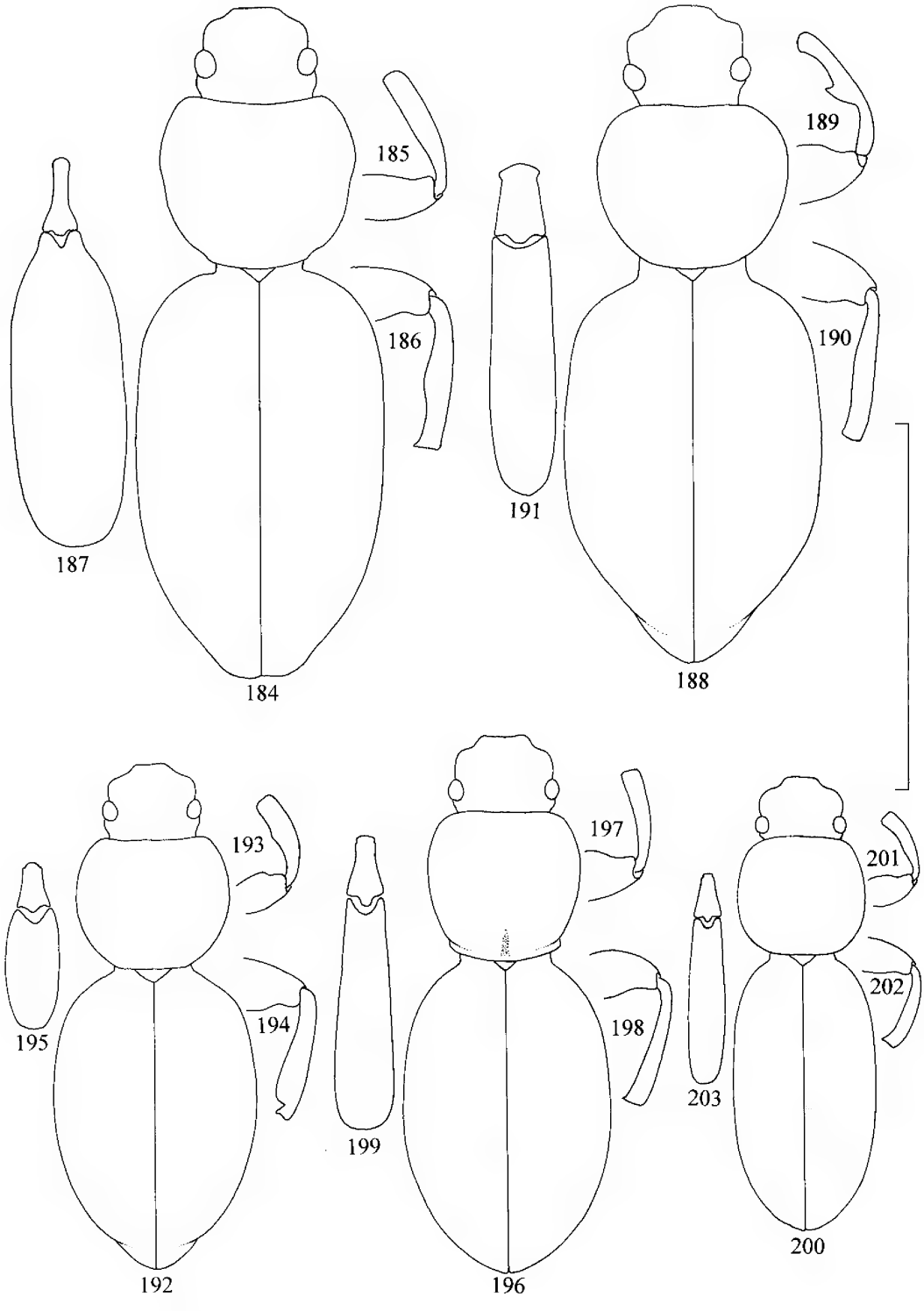
Figs 97–128. Male body shape, anterior tibia, posterior tibia and aedeagus of *Laena* species. – 97–100. *L. luguica* n. sp., holotype; – 101–104. *L. formaneki,* lectotype; – 105–108. *L. jizushana,* holotype; – 109–112. *L. qinlingica* n. sp., holotype; – 113–116. *L. cylindrica,* holotype; – 117–120. *L. ludingica* n. sp., holotype; – 121–124. *L. ganzica* n. sp., holotype; – 125–128. *L. yufengsi,* holotype. – Scale: 5.0 mm (body, legs), 2.5 mm (aedeagus).



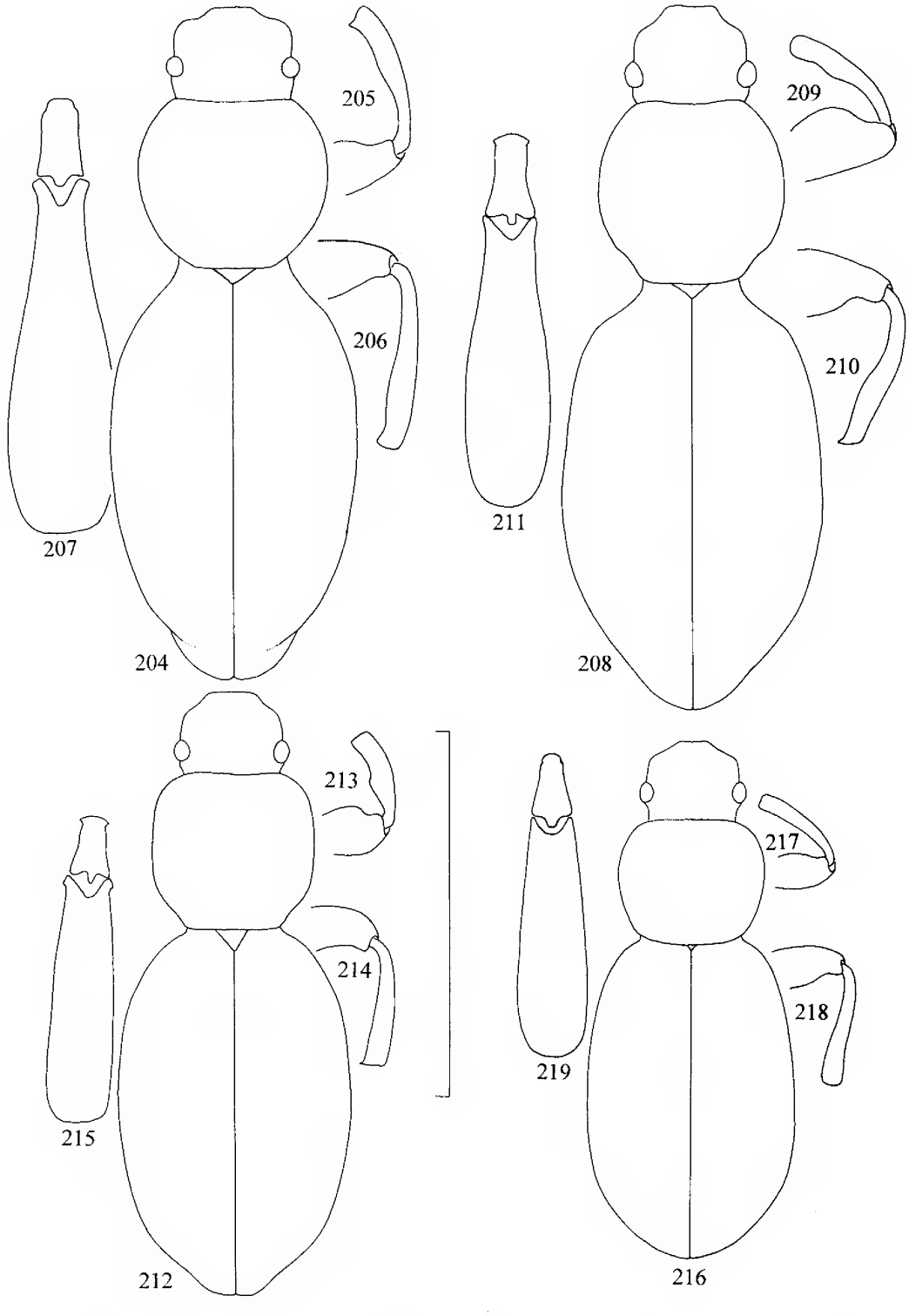
Figs 129–159. Male body shape, anterior tibia, posterior tibia and aedeagus of *Laena* species. – 129–132. *L. fengileana*, holotype; – 133–135. *L. heinzi* n. sp., female holotype; – 136–139. *L. safraneki* n. sp., holotype; – 140–143. *L. businskyorum* n. sp., holotype; – 144–147. *L. deqenica* n. sp., holotype; – 148–151 *L. diancangica* n. sp., holotype; – 152–155. *L. zogqenica* n. sp., holotype; – 156–159. *L. tuntalica* n. sp., holotype. – Scale: 5.0 mm (body, legs), 2.5 mm (aedeagus).



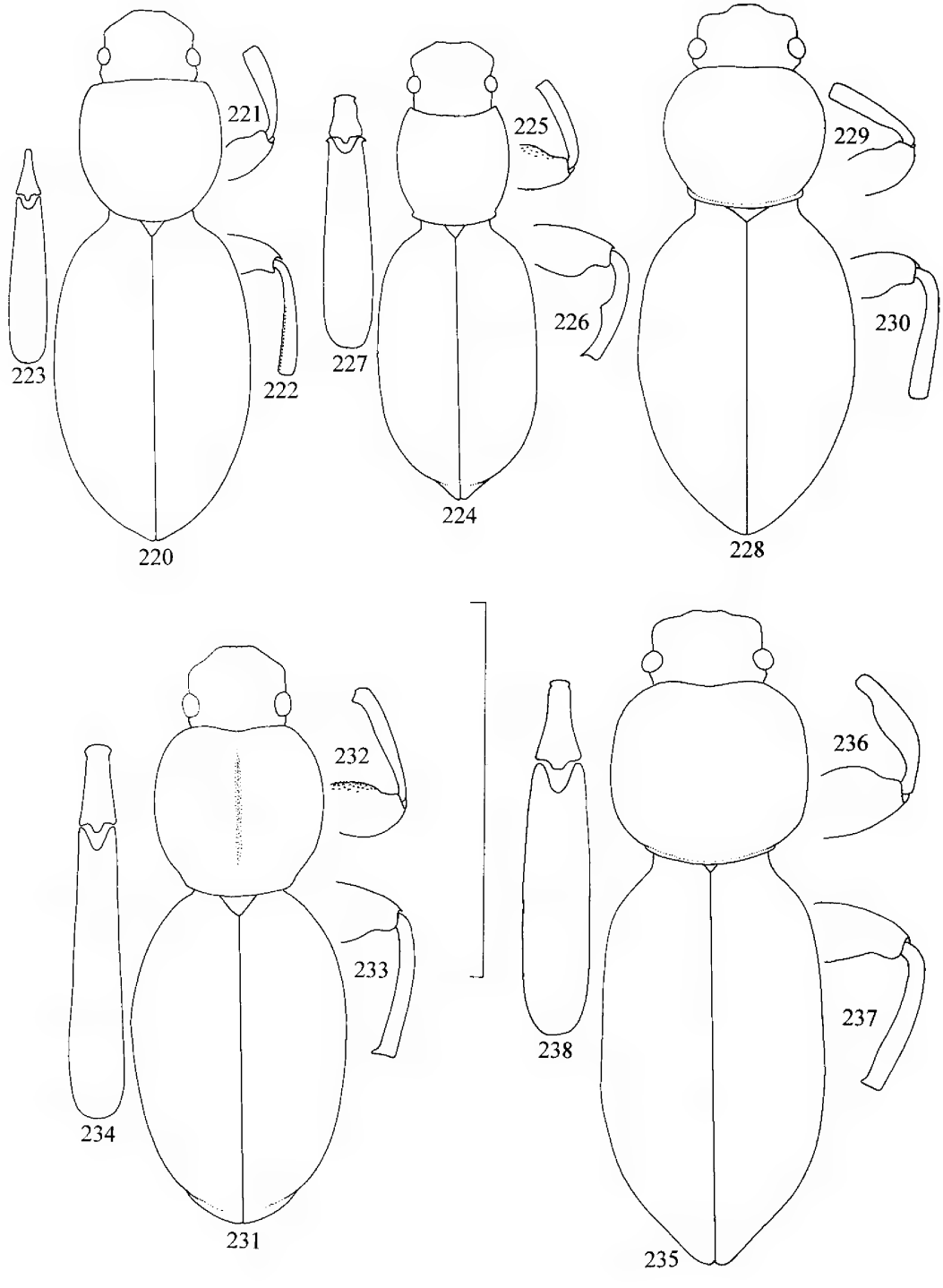
Figs 160–183. Male body shape, anterior tibia, posterior tibia and aedeagus of *Laena* species. – 160–163. *L. hengduanica* n. sp., holotype; – 164–167. *L. alticola*, lectotype; – 168–171. *L. parallelocollis*, holotype; – 172–175. *L. gyamdaica* n. sp., holotype; – 176–179. *L. dickorei* n. sp., holotype; – 180–183. *L. tryznai* n. sp., holotype. – Scale: 5.0 mm (body, legs), 2.5 mm (aedeagus).



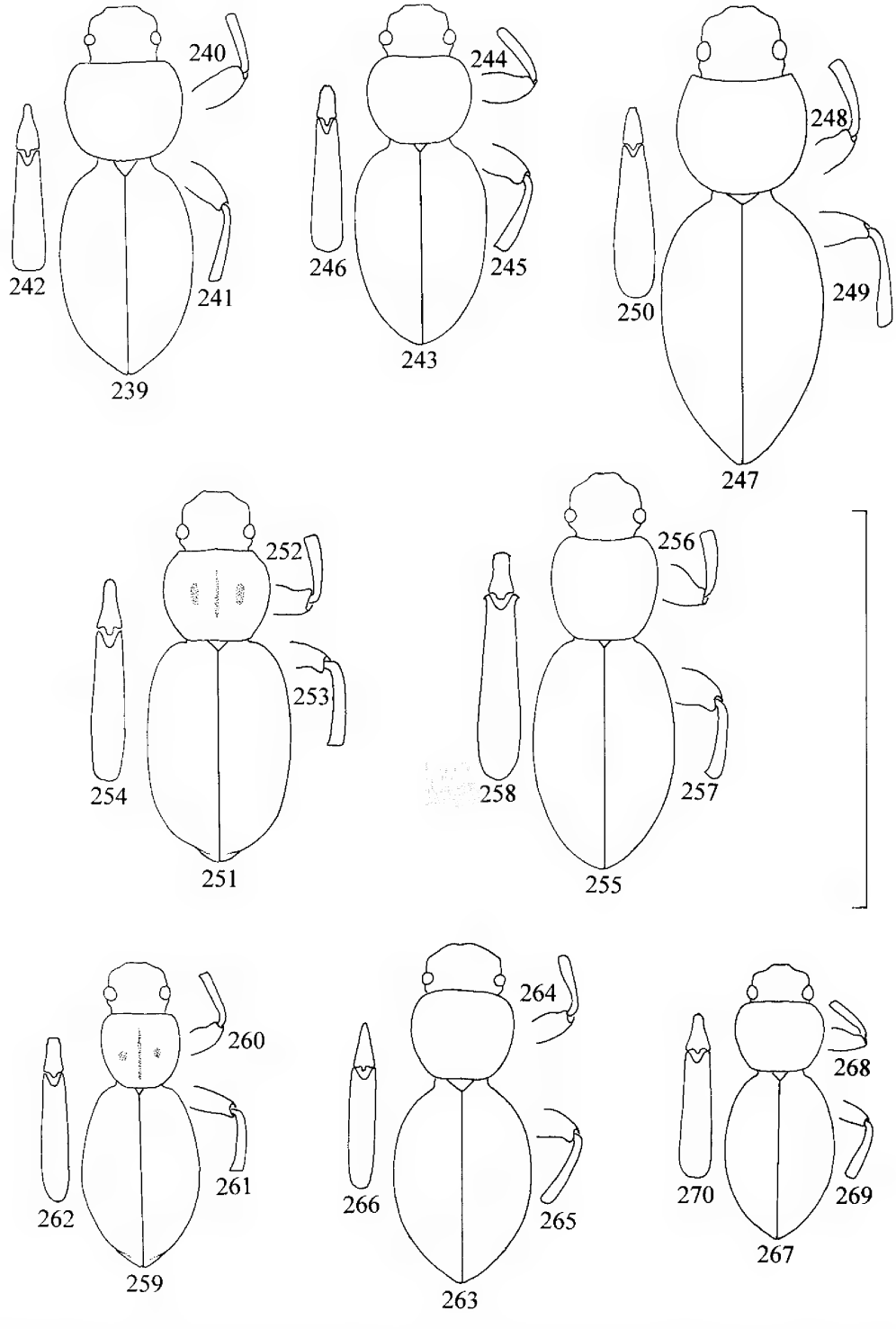
Figs 184–203. Male body shape, anterior tibia, posterior tibia and aedeagus of *Laena* species. – 184–187. *L. gigantea*, non-type male; – 188–191. *L. schusteri*, holotype; – 192–195. *L. baishuica* n. sp., holotype; – 196–199. *L. langmusica* n. sp., holotype; – 200–203. *L. cholanica* n. sp., holotype; – Scale: 5.0 mm (body, legs), 2.5 mm (aedeagus).



Figs 204–219. Male body shape, anterior tibia, posterior tibia and aedeagus of *Laena* species. – 204–207. *L. xuerensis,* holotype; – 208–211. *L. kangdingica* n. sp., holotype; – 212–215. *L. zongdianica* n. sp., holotype; – 216–219. *L. nyingchica* n. sp., holotype; – Scale: 5.0 mm (body, legs), 2.5 mm (aedeagus).



Figs 220–238. Male body shape, anterior tibia, posterior tibia and aedeagus of *Laena* species. – 220–223. *L. becvari* n. sp., holotype; – 224–227. *L. houzhenzica* n. sp., holotype; – 228–230. *L. hingstoni,* holotype (aedeagus missing); – 231–234. *L. bifoveolata,* holotype of *imura* n. syn.; – 235–238. *L. puetzi* n. sp., holotype. – Scale: 5.0 mm (body, legs), 2.5 mm (aedeagus).



Figs 239–270. Male body shape, anterior tibia, posterior tibia and aedeagus of *Laena* species. – 239–242. *L. watanabei*, holotype; – 243–246. *L. daliensis*, holotype; – 247–250. *L. yuzhuensis*, holotype; – 251–254. *L. luhuoica* n. sp., holotype; – 255–258. *L. paomaica* n. sp., holotype; – 259–262. *L. wrasei* n. sp., holotype; – 263–266. *L. brendelli* n. sp., holotype; – 267–270. *L. emeishana*, holotype; – Scale: 5.0 mm (body, legs), 2.5 mm (aedeagus).

2.71. *Laena zongdianica* **n. sp.** (Figs 212–215)

Holotype (♂): China, Yunnan, Zongdian, 16.–21. VI. 1994 leg. E. Kučera, CSBC.

Paratypes: China, Yunnan, 25 km E Zhongdian (= Zongdian), 3300–4000 m, 12.–14. VII. 1995 leg. Bolm, 11 ex. NHMB, 10 ex. CSBC, 8 ex. SMNS. – China, N Yunnan, 15 km W Zhongdian, 4200–4700 m, 23. VI. 1994, leg. J. Farcač & D. Král, 2 ex. NHMB, 1 ex. CJTK. – China, N Yunnan, Xue Shan near Zhongdian, 4000–4100 m, 23.–24. VI. 1996 leg. J. Farkač, P. Kabátek & A. Smetana, 13 ex. NHMB, 3 ex. SMNS. – China, N Yunnan, Xue Shan near Zhongdian, 3800 m, 23.–26. VI. 1996 leg. J. Farkač, P. Kabátek & A. Smetana, 5 ex. NHMB, 2 ex. SMNS. – China, N Yunnan, Zhongdian, 3200–3300 m, 21.–22. VI. 1996 leg. J. Farkač, P. Kabátek & A. Smetana, 1 ex. NHMB. – China, NW Yunnan, 17 km NW Zhongdian, 3500–4000 m, 15.–23. V. 1999 leg. L. & R. Businský, 9 ex. CSBC. – China, Yunnan, Daju, 2000 m, 22.–25. VI. 1996 leg. E. Kučera, 1 ♀ CSBC.

Etymology: Named after the village Zongdian, in whose vicinity most of the types have been collected.

Description: Body length 8.5–9.0 mm. Eyes (Fig. 212) not reduced, not prominent. Shape of pronotum see Fig. 212, disc scattered with big punctures, distance as 1–4 diameters, nearly all punctures with short setae, surface even and shining, lateral margin bordered, basal margin bordered and not bent downwards, posterior angles somewhat marked, propleures with wider punctation and without setation. Elytra (Fig. 212) with rows of punctures in indistinct striae, punctures of rows as big as on pronotum, all punctures without setae, intervals with an irregular row of scattered very small punctures, the small punctures of the intervals bearing each a very short seta, intervals convex and somewhat dull, interval 9 with 3 setiferous pores. All femora in both sexes without teeth. Anterior tibiae of males medially with a distinct internal excavation, middle tibia of males medially with a weaker internal excavation, posterior tibiae of males with minutely hooked inner apex but without internal dilatation (Figs 213–214). Aedeagus see Fig. 215.

Diagnosis: *Laena zongdianica* n. sp. shares with *gigantea* the big body size, the nearly naked dorsal surface, the number and position of setiferous pores of the interval 9 and the unarmed femora, but can be separated by a nearly subquadrate pronotum, by a distinct excavation of the male protibia and by a feeble excavation of the male middle tibia, by a not dilatated male posterior tibia and by a different shape of the aedeagus. *Laena kangdingica* n. sp. is also similar but can be separated mainly by the different pronotum and the different aedeagus.

3. Identification key for the species of *Laena* in China

This key (compare also figures) may be used only for identifications and does not include all diagnostic characters, it cannot be used for phylogenetical purposes. The key is suitable only for males because of the use of sexual characters. The distributional data (see map Fig. 1 and the following chapter 4.) might be helpful for the identification, because most of the species are known only from smaller areas. Not included in this key are the species *leonhardi* from Xinjiang/Sinkiang (belonging to the Middle Asian fauna, see Schawaller 1995) and *ovipennis* from nearby Hongkong (unknown to me).

1 Eyes reduced and kidney-like in lateral view or even completely reduced; vertex of head with 2 long setae; scutellum big and not covered by the pronotum **2**

– Eyes not reduced and round in lateral view as usual in the genus; vertex of head without 2 distinct long setae; scutellum small and usually covered by the pronotum **6**

2 Pronotum with crenulated lateral margin (Figs 1 G, 2–5) ..... ***nomurai* n. sp.**
– Pronotum with smooth lateral margin **3**

3 Pronotum wider than medially long, maximum width near base (Figs 1 G, 6–9) .... ***hualongica* n. sp.**
– Pronotum subquadrate or longer than wide, maximum width in or before the middle . **4**

4 Pronotum with the maximum width near the middle, joint parameres very short and triangular (Figs 1 G, 10–13) ..... ***hongyuanica* n. sp.**
– Pronotum with the maximum width in the anterior part, joint parameres very long and finger-like or unknown **5**

5 Eyes completely reduced, only with some lighter cuticular spots; pronotum trapezoid-like with straight lateral margin; aedeagus unknown (Figs 1 G, 14–16) ***nanpingica* n. sp.**
– Eyes not completely reduced, kidney-like in lateral view; pronotum cordiform with rounded lateral margin; aedeagus with long, finger-like joint parameres (Figs 1 K, 17–20) ..... ***benesi* n. sp.**

6 Elytral interval 7 keel-like and pronounced, lateral intervals 8–9 not or indistinctly to be seen in dorsal view, joint elytra between these keel-like intervals flat or nearly flat **7**
– Elytral interval 7 not keel-like, sometimes distinctly convex but not separating the joint elytra in a flat inner part and a vertical lateral part **15**

7 Femora in both sexes without teeth but with distinct angle; lateral margin of pronotum unbordered and rounded (Figs 1 N, 21–24) ..... ***kubani* n. sp.**
– Femora in both sexes without teeth or angles; lateral margin of pronotum bordered or at least marked **8**

8 Elytral interval 7 keel-like and swollen in the humeral region, here knob-like **9**
– Elytral interval 7 keel-like over its total length and not swollen in the humeral region **10**

9 Joint elytra about twice as long as wide; anterior corners of the pronotum protruding; elytral intervals dull and only with fine punctures; posterior tibiae of males unmodified (Fig. 1 L, Kaszab 1970: Fig. 5) ..... ***mirabilis***
– Joint elytra about 1.6 times as long as wide; anterior corners of the pronotum rounded; elytral intervals shining and with dense and rough punctation; posterior tibiae of males armed with spines (Figs 1 O, 37–40) ..... ***mulica* n. sp.**

10 Body length 4.7–5.2 mm; lateral margin of pronotum crenulated (Figs 1 K, 33–36) .... ***yajiangica* n. sp.**
– Body length over 6 mm; lateral margin of pronotum smooth **11**

11 Pronotum besides impressions flat, so disc on the same level as lateral margins **12**
– Pronotum besides impressions more or less convex, so disc higher than lateral margins **13**

12 Base of pronotum with distinct impression (besides other impressions), this base distinctly narrower than anterior margin with protruding anterior corners; joint parameres of aedeagus broad, spade-like (Figs 1 P, 25–28) ..... ***yulongica* n. sp.**
– Base of pronotum without distinct impression, this base about as wide as anterior margin with rounded anterior corners; joint parameres of aedeagus longer, triangular (Figs 1 O, 29–32) ..... ***bowaica* n. sp.**

13 Pronotum and elytra shining; pronotum strongly convex with distinct lateral border, basal margin bent downwards; elytral rows with fine punctures (Figs 1 G, 41–44) .... ***haigouica* n. sp.**
– Pronotum and elytra dull; pronotum feebly convex with marked but unbordered lateral margin, basal margin not bent downwards; elytral rows with big punctures **14**

14 Base of pronotum distinctly narrower than anterior margin; punctures of elytral intervals

as big as punctures of the rows; joint parameres of the aedeagus triangular (Figs 1 N, 45–48) ..... ***babashanica* n. sp.**
– Base of pronotum about as wide as anterior margin; punctures of elytral intervals distinctly smaller than punctures of the rows; joint parameres of the aedeagus spade-like (Figs 1 L, 49–52) ..... ***schuelkei* n. sp.**

15 All femora or at least anterior femora in both sexes medially with teeth or distinct angles **16**
– All femora without distinct modifications **35**

16 Elytra (not pronotum) without any setation in the elytral rows and intervals **17**
– Elytra with long or short setae in the elytral rows and/or in the elytral intervals **21**

17 Tibiae of males without distinct modifications; pronotum distinctly narrower than joint elytra; joint parameres of the aedeagus longer, triangular **18**
– Tibiae of males with modifications; pronotum nearly as wide as elytra; joint parameres of the aedeagus broad, spade-like **19**

18 Base of pronotum narrower than anterior margin; lateral margin of pronotum bordered (Figs 1 O, P, R, 53–56) ..... ***chinensis***
– Base of pronotum nearly as wide as anterior margin; lateral margin of pronotum unbordered (Figs 1 L, 65–68) ..... ***smetanai* n. sp.**

19 Posterior tibiae of males with distinctly hooked inner apex, medial side with granules; joint parameres of the aedeagus about twice as long as wide (Figs 1 O, 57–60) ..... ***turnai* n. sp.**
– Posterior tibiae of males medially dilated or with teeth, without granules; joint parameres of the aedeagus subquadrate **20**

20 Elytral intervals with distinct punctation; male anterior tibia with parallel inner side; male posterior tibia medially with tooth (Figs 1 M, O, 61–64) ..... ***tabanai***
– Elytral intervals only with very fine and scattered punctures; male anterior tibia medially with dilatation; male posterior tibiae medially with rounded dilatation (Figs 1 I, 69–72) ..... ***hubeica* n. sp.**

21 Only anterior femora with teeth, medial and posterior tibiae without modifications (Figs 1 R, 73–76) ..... ***yasuakii***
– All 3 femora with teeth or at least with distinct angles **22**

22 Body length 9.3–9.6 mm; elytra with dense and big punctation of the intervals, so the elytral intervals are indistinct (Figs 1 K, 77–80) ..... ***shaluica* n. sp.**
– Body length less than 8.0 mm; elytra with distinct elytral rows and separated intervals **23**

23 Very small species with body length 3.7–4.2 mm **24**
– Bigger species with body length more than 5.0 mm **26**

24 Pronotum cordiform, base of pronotum distinctly narrower than anterior margin; setation of the elytral rows distinctly shorter than pronotal setation (Figs 1 M, 81–84) ..... ***wolongica* n. sp.**
– Pronotum subquadrate, base of pronotum nearly as wide as anterior margin; setation of similar length on elytra and pronotum **25**

25 Maximum width of the pronotum in the middle; aedeagus with short joint parameres (Figs 1 L, 93–96) ..... ***daxueica* n. sp.**
– Maximum width of the pronotum before the middle; aedeagus with long joint parameres (Figs 1 C, 89–92) ..... ***gracilis***

26 Lateral margin of the pronotum distinctly bordered all over the length **27**
– Lateral margin of the pronotum unbordered, sometimes partly somewhat marked **29**

27 Pronotum cordiform with the basal margin distinctly narrower than anterior margin; body length 6.6–7.9 mm (Figs 1 R, 85–88) ..... ***angulifemoralis***

– Pronotum subquadrate with the basal margin as wide as the anterior margin; body length 4.8–6.0 mm **28**

28 Pronotum and elytra with erect and long setation; joint parameres of the aedeagus short and broad (Figs 1 N, O, 97–100) ..... ***luguica* n. sp.**
– Pronotum and elytra with short and adpressed setation; joint parameres of the aedeagus long and triangular (Figs 1 B, 101–104) ..... ***formaneki***

29 Pronotum with rough, partly confluent punctation **30**
– Pronotum with fine punctation, punctures always distinctly separated **33**

30 Elytral intervals densely scattered with distinct punctures (Figs 1 R, 105–108) ***jizushana***
– Elytral intervals without punctures or with a row of scattered very small punctures . **31**

31 Pronotum subquadrate with the basal margin as wide as the anterior margin; male anterior tibia medially with distinct tooth (Figs 1 L, 117–120) ..... ***ludingica* n. sp.**
– Pronotum cordiform with the basal margin narrower than the anterior margin; male anterior tibia without modification **32**

32 All femora with distinct teeth; alternate elytral intervals distinctly convex; joint parameres of the aedeagus broad, spade-like (Figs 1 L, 121–124) ..... ***ganzica* n. sp.**
– All femora only with distinct angles; all intervals equally slightly convex; joint parameres of the aedeagus long, triangular (Figs 1 N, P, 125–128) ..... ***yufengsi***

33 Pronotum and elytra with long, dense and erect setation (Figs 1 H, L, 109–112) .... ***qinlingica* n. sp.**
– Pronotum with short, sparse and adpressed setation **34**

34 Maximum width of the pronotum in the middle, base of pronotum as wide as anterior margin (Figs 1 C, 113–116) ..... ***cylindrica***
– Maximum width of the pronotum near anterior corners, base of pronotum narrower than anterior margin (Figs 1 H, L, 129–132) ..... ***fengileana***

35 Elytra (not pronotum) without any setation or with very short setation in the elytral rows and/or intervals (setae not distinctly longer than a diameter of the punctures in the rows) **36**
– Elytra with distinct, longer setation in the elytral rows and/or intervals **57**

36 Punctation of elytra confused, surface not distinctly separated in elytral rows and intervals **37**
– Elytra always with distinct elytral rows and punctured or unpunctured intervals, sometimes punctures in the intervals as big as in the rows, sometimes the elytral rows extinguished in the posterior part of the elytra **39**

37 Body length 5.5–6.2 mm; punctation on pronotum and elytra distinctly separated, surface shining (Figs 1 C, 133–135) ..... ***beinzi* n. sp.**
– Body length 6.5–8.0 mm; punctation on pronotum and elytra confluent, surface dull . **38**

38 Pronotum distinctly broader than long; elytra 1.5 times longer than wide, widest in posterior third (Figs 1 E, 140–143) ..... ***businskyorum* n. sp.**
– Pronotum nearly as wide as long; elytra 1.8 times longer than wide, widest in the middle (Figs 1 E, 144–147) (differences "weak", but no intermediate forms known) .... ***deqenica* n. sp.**

39 Elytral intervals with distinct punctation, these punctures densely scattered and about half as big as punctures in the rows (Figs 1 E, 136–139) ..... ***safraneki* n. sp.**
– Elytral intervals without distinct punctation or only with a indistinct row of very fine punctures **40**

40 Smaller species, body length 3.8–6.0 mm **41**
– Bigger or huge species, body length 6.2–11.5 mm **45**

41 Pronotum cordiform, base distinctly narrower than anterior margin **42**
– Pronotum subquadrate, base nearly as wide as anterior margin **43**

42 Punctures of elytral rows bigger than width of intervals; pronotum without lateral border; joint parameres of aedeagus shorter (Figs 1 R, 148–51) ..... ***diancangica* n. sp.**
– Punctures of elytral rows distinctly smaller than width of intervals; pronotum with lateral border; joint parameres of aedeagus longer (Figs 1 F, 152–155) ..... ***zogqenica* n. sp.**

43 Anterior and posterior tibiae of males swollen medially; joint parameres of aedeagus broad with blunt tip (Figs 1 E, K, 156–159) ..... ***tuntalica* n. sp.**
– Male tibiae without distinct sexual dimorphism; joint parameres of aedeagus triangular **44**

44 Pronotum with rounded lateral margins; elytral punctures bigger, distance sometimes only about 1 diameter (Figs 1 C, 164–167) ..... ***alticola***
– Pronotum with parallel lateral margins; elytral punctures finer, distance always over 2 diameters (Figs 1 C, 168–171) (differences "weak", but not intermediate forms known) . ..... ***parallelocollis***

45 Posterior tibiae of males medially in the distal half with a row of distinct spines **46**
– Posterior tibiae of males without distinct secondary characters or with secondary characters, but in this case not with several spines **49**

46 Lateral margin of pronotum unbordered; pronotum with rough punctation, punctures laterally partly confluent (Figs 1 E, L, 160–163) ..... ***bengduanica* n. sp.**
– Lateral margin of pronotum completely bordered; pronotum with finer punctation, distance of punctures more than 2 diameters **47**

47 Pronotum about 1.3 times broader than long; joint parameres of aedeagus broad and with blunt tip (Figs 1 E, 180–183) ..... ***tryznai* n. sp.**
– Pronotum about as wide as long; joint parameres of aedeagus triangular **48**

48 Pronotum with parallel sides; posterior tibiae of males besides spines distally somewhat swollen but without distinctly hooked inner apex (Figs 1 D, 176–179) .. ***dickorei* n. sp.**
– Pronotum with rounded sides; posterior tibiae of males besides spines distally somewhat swollen and with distinctly hooked inner apex (Figs 1 D, 172–175) ... ***gyamdaica* n. sp.**

49 Elytral rows distinctly distinguished in the posterior part of the elytra; elytral intervals distinctly shagreened and dull (Figs 1 P, R, 204–207) ..... ***xuerensis***
– Elytral rows more or less complete; elytral intervals shining **50**

50 Posterior tibiae of males medially with a distinct hump-like dilatation shortly before apex (Figs 1 P, 192–195) ..... ***baishuica* n. sp.**
– Posterior tibiae of males without secondary sexual characters or with weak dilatation in the middle **51**

51 Anterior tibia of male medially with a distinct tooth; pronotal lateral margin unbordered and completely rounded (Figs 1 M, 188–191) ..... ***schusteri***
– Anterior tibia of male without peculiarities or only somewhat swollen; pronotal lateral margin bordered or at least marked **52**

52 Base of pronotum distinctly narrower than anterior margin; joint parameres of the aedeagus thin and finger-like (Figs 1 L, 184–187) ..... ***gigantea***
– Base of pronotum more or less as wide as anterior margin; joint parameres of the aedeagus broad, spade-like or triangular **53**

53 Basal margin of pronotum bent downwards, so this margin is on a distinctly deeper level than disc **54**
– Basal margin of pronotum not bent downwards, so this margin is more or less on the same level as disc **55**

54 Body length 9.0–10.5 mm; anterior tibiae of males medially somewhat excavated and posterior tibiae of males medially swollen (Figs 1 L, 208–211) ..... ***kangdingica* n. sp.**
– Body length 6.8–8.0 mm; tibiae of males without distinct peculiarities (Figs 1 G, H, 196–199) ..... ***langmusica* n. sp.**

55 Pronotum 1.2 times wider than long, lateral margins rounded; elytra widest in posterior part; anterior tibiae of males without peculiarities (Figs 1 D, 216–219) ***nyingchica* n. sp.**
– Pronotum nearly as wide as long, lateral margins more or less parallel; elytra widest in the middle; anterior tibiae of males modified **56**

56 Slender species, elytra parallel and 2.0 times longer than wide; posterior corners of pronotum rounded; anterior tibiae of males slightly excavated medially (Figs 1 E, 200–203) . . . . . ***cholanica* n. sp.**
– Robust species, elytra rounder and 1.6 times longer than wide; posterior corners of pronotum pronounced; anterior tibiae of males with acute corner medially (Figs 1 N, 212–215) . . . . . ***zongdianica* n. sp.**

57 Elytral intervals between elytral rows either with scattered distinct punctures or with an additional row of big punctures (interval punctures about half as big as row punctures) **58**
– Elytral intervals without or only with a row of indistinct very fine punctures in the elytral intervals **61**

58 Elytral intervals with a single row of distinct punctures; posterior tibiae of males granulated medially (Figs 1 N, 220–223) . . . . . ***becvari* n. sp.**
– Elytral intervals with scattered dense and big punctation **59**

59 Posterior tibia of males medially with a distinct tooth; joint parameres of the aedeagus broad and spade-like (Figs 1 H, 224–227) . . . . . ***houzhenzica* n. sp.**
– Posterior tibia of males only with finely hooked inner apex; joint parameres of the aedeagus longer and triangular **60**

60 Pronotum and elytra dull, punctation of pronotum confluent; anterior femora of males granulated medially; anterior tibiae of males with a hooked inner apex (Figs 1 F, G, H, I, 231–234) . . . . . ***bifoveolata***
– Pronotum and elytra shining, punctation of elytra separated; anterior femora of males smooth; anterior tibiae of males distinctly swollen medially (Figs 1 F, L, 235–238) . . . . . ***puetzi* n. sp.**

61 Pronotum and elytra with long and erect setae **62**
– Pronotum and elytra with short, adpressed setae **64**

62 Pronotum with rounded lateral margins, widest in the middle; base of pronotum indistinctly bordered and bent downwards; pronotum with fine punctation, these punctures distinctly finer than punctures in the elytral rows (Figs 1 C, 228–230) . . . . . ***hingstoni***
– Pronotum trapezoid, widest before middle; base of pronotum unbordered and not bent downwards; pronotum with bigger punctures as big as punctures in the elytral rows . **63**

63 Joint parameres of the aedeagus triangular with sinuated lateral margin and finger-like tip (Figs 1 S, 239–242) . . . . . ***watanabei***
– Joint parameres of the aedeagus broad with blunt tip (Figs 1 P, R, 243–246) . . . ***daliensis***

64 Pronotum with rough punctation, punctures often confluent, disc with distinct impressions, surface dull and shagreened **65**
– Pronotum with finer punctation, punctures never confluent, disc without impressions, surface shining **67**

65 Anterior margin of pronotum excavated and anterior corners of the pronotum protruding; lateral margins of the pronotum distinctly bordered (Figs 1 R, 247–250) ***yuzhuensis***
– Anterior corners of the pronotum not distinctly protruding; lateral margins of the pronotum unbordered or at least indistinctly marked **66**

66 Elytral inner intervals flat, alternate intervals 5 and 7 convex; intervals about 3 times wider than the punctures of the elytral rows; setae of elytral intervals distinctly longer than setae of the rows (Figs 1 F, 251–254) . . . . . ***luhuoica* n. sp.**
– Elytral intervals equally convex; intervals about 1–2 times wider than the punctures of the elytral rows; setae of elytral intervals as long as setae of the rows (Figs 1 L, 259–262) . . . . . ***wrasei* n. sp.**

67 Pronotum widest in the anterior third; lateral margin of pronotum bordered (Figs 1 K, L, 255–258) ..... ***paomaica* n. sp.**
– Pronotum widest in the middle; lateral margin of pronotum unbordered **68**

68 Joint parameres of the aedeagus triangular with straight sides and with acute tip (Figs 1 N, 263–266) ..... ***brendelli* n. sp.**
– Joint parameres of the aedeagus broad with sinuated sides and blunt tip (Figs 1 M, 267–270) ..... ***emeishana.***

4. Zoogeographical notes

When plotting the locality data of the different species in maps I found the species concentrated in several areas, these (idealized) areas are figured in the map (Fig. 1: A–T). However, our knowledge about the distribution of the species of *Laena* in China is only in a preliminary phase, thus it is not clear, whether these areas represent real distibutional areas or only areas, for example, with better access for collecting. The areas A–T contain the following species (some species occur not only in a single area, they are listed then for each area):

A: *leonhardi;*
B: *formaneki;*
C: *alticola, cylindrica, gracilis, heinzi* n. sp., *hingstoni, parallelocollis;*
D: *dickorei* n. sp., *gyamdaica* n. sp., *nyingchica* n. sp.;
E: *businskyorum* n. sp., *cholanica* n. sp., *deqenica* n. sp., *hengduanica* n. sp., *safraneki* n. sp., *tryznai* n. sp., *tuntalica* n. sp.;
F: *bifoveolata, luhuoica* n. sp., *puetzi* n. sp., *zogqenica* n. sp.
G: *benesi* n. sp., *bifoveolata, haigouica* n. sp., *hongyuanica* n. sp., *hualongica* n. sp., *langmusica* n. sp., *nanpingica* n. sp., *nomurai* n. sp.;
H: *bifoveolata, fengileana, houzhenzica* n. sp., *langmusica* n. sp., *qinlingica* n. sp.;
I: *bifoveolata, hubeica* n. sp.;
K: *benesi* n. sp., *paomaica* n. sp., *shaluica* n. sp., *tuntalica* n. sp., *yajiangica* n. sp.;
L: *daxueica* n. sp., *fengileana, ganzica* n. sp., *gigantea, hengduanica* n. sp., *kangdingica* n. sp., *ludingica* n. sp., *mirabilis, paomaica* n. sp., *puetzi* n. sp., *qinlingica* n. sp., *schuelkei* n. sp., *smetanai* n. sp., *wrasei* n. sp.;
M: *emeishana, schusteri, tabanai, wolongica* n. sp.;
N: *becvari* n. sp., *brendelli* n. sp., *habashanica* n. sp., *kubani* n. sp., *luguica* n. sp., *xuerensis, yufengsi, zongdianica* n. sp.;
O: *bowaica* n. sp., *chinensis, luguica* n. sp., *mulica* n. sp., *tabanai, turnai* n. sp.;
P: *baishuica* n. sp., *chinensis, daliensis, xuerensis, yufengsi, yulongica* n. sp.;
R: *angulifemoralis, chinensis, daliensis, diancangica* n. sp., *jizushana, xuerensis, yasuakii, yuzhuensis;*
S: *watanabei;*
T: *ovipennis.*

Most species occur only in one of these areas, only a few species occur in several areas. The widest distribution shows *Laena bifoveolata* in the areas F, G, H, and I.

The disjunctions between some areas (compare map in Fig. 1) probably reflect either deficits of knowledge, for example between A and B (the genus is known from the adjacent Middle Asian countries and from Pakistan) and between B, C, and D (known in a conjunct area in the adjacent Himalayas). The disjunctions however, for example between R, S, and T (although the genus is known from northern Vietnam) might be caused by human influence, very probably by cutting down forest, thus destroying suitable habitats.

5. References

BLAIR, K. G. (1923): Coleoptera of the second Mt. Everest expedition, 1922. – Part II. Heteromera. – Ann. Mag. nat. Hist. (Ser. 9) **11**: 278–285; London.

HELLER, K. M. (1923): Die Coleopterenausbeute der STÖTZNERschen Sze-Tschwan-Expedition (1913–1915). – Ent. Bl. **19**: 61–79; Berlin.

KASZAB, Z. (1965): Neue Tenebrioniden (Coleoptera) aus China. – Annales hist.-nat. Mus. natn. hung. **57**: 279–285; Budapest.

– (1970): Fünf neue Tenebrioniden aus Asien (Coleoptera). – Ent. Arb. Mus. Frey **21**: 112–122; Tutzing.

MASUMOTO, K. (1996): Fourteen new *Laena* (Coleoptera, Tenebrionidae) from China, Vietnam and Thailand. – Bull. natn. Sci. Mus. Tokyo (A) **22**: 165–187; Tokyo.

– (1998): New Tenebrionid beetles from East Asia (Coleoptera, Tenebrionidae). – Jap. J. syst. Ent. **4**: 305–319; Matsuyama.

MASUMOTO, K. & YIN, W. (1993): Two new Yunnanese beetles of the genera *Laena* (Tenebrionidae) and *Sivacrypticus* (Archeocrypticidae) (Coleoptera). – Elytra **21**: 239–243; Tokyo.

– & – (1994): Four new *Laena* species (Coleoptera, Tenebrionidae) from Yunnan, Southwest China. – Elytra **22**: 165–170; Tokyo.

SCHAWALLER, W. (1995): Revision der *Laena*-Arten Mittelasiens (Insecta, Coleoptera, Tenebrionidae). – Spixiana **18**: 65–73; München.

SCHUSTER, A. (1916): Monographie der Coleopterengattung *Laena* Latreille. – Verh. zool.-bot. Ges. Wien **66**: 495–629; Wien.

– (1926) Bestimmungstabelle der *Laena*-Arten aus dem Himalaya und den angrenzenden Gebieten. Mit Beschreiben neuer Arten. – Kol. Rdsch. **12**: 31–54; Wien.

– (1940): Über drei neue asiatische Tenebrioniden (Col. Tenebr.). – Mitt. münch. ent. Ges. **30**: 861–866; München.

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